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THE GOVERNANCE OF HUMAN RESOURCES IN THE VIETNAMESE HEALTHCARE SYSTEM: A CRITICAL ANALYSIS OF MATERNITY SERVICES

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Governance, human resources for health, health workforce, health worker motivation, health worker performance, health system, maternal health, essential obstetric care services, exploratory factor analysis, mixed-method, qualitative research.

Abstract

Background

Human resources for health (HRH) are the central issues for advancing any health system (World Health Organisation, 2006). The availability of skilled health workers (HW) is critical to assuring the quality of healthcare services, including maternal health services. While the Vietnamese government acknowledges the importance of ensuring sufficient human resources for the health system, analysis of existing, albeit limited information, indicates a number of potential issues, including an imbalance and maldistribution of the essential health workforce, shortages of appropriately skilled HWs and constraints in management and utilisation of HWs.

Developing a health workforce that is capable, motivated and supported is essential to achieving national and global health goals (World Health Organisation, 2006). Good governance of the health workforce will help to improve the quality of health care, assure equity in health, and should help to improve efficiency in the use of health resources. While performance of the health workforce is considered the cornerstone of health service quality, there has been no research or systematic analysis to identify the determinants of HW performance, or the points of weakness and gaps in the governance and internal management of human resources in the health care system at the district level in Vietnam.

This study was designed to understand how governance issues influence the organisation of the healthcare system at the commune and district levels and how this in turn influences the motivation, competencies, and performance of health workers. It is likely that the issues identified in relation to human resource management in maternal health services will reflect issues for the broader Vietnamese health system.

Research Questions:

1. What is the current quantity, quality, and organisational structure of the maternal health workforce at the commune and district levels in Vietnam, and how much does it vary at the district level?

2. How do individual factors, such as motivation and competency affect the performance of the maternal health workforce at the commune and district levels?
3. How do the external factors, including organisational, context and governance-related issues at provincial and district levels affect the maternal health workforce in Vietnam?
4. From the perspective of human resources for health, what aspects of the health system governance could be strengthened to improve maternal health services?

Methodology

A mixed-methods study design was used to understand the factors that influence the translation and implementation of central human resources in health policy at the commune and district levels. The study locations were five districts of two northern mountainous provinces of Vietnam, Bac Giang and Lao Cai. There were three phases in this study:

Phase 1: A literature review of health governance and HRH was undertaken in order to identify the factors influencing HW performance as well as the key domains of governance of HRH. The findings of the literature review were used to develop the conceptual framework and the research instruments for data analysis.

Phase 2: This phase had two stages. **Stage 1** involved conducting interviews with key informants from the Vietnamese Ministry of Health and provincial health departments to identify the perceived health systems and governance-related factors affecting HRH in rural and remote areas. Key informants from the Ministry of Health included representatives from the Personnel Department and the Maternal and Child Health Department. The purpose of key informant interviews was to shape the interview schedule for HWs. After the first drafts of the survey instrument and interview guide were developed, a pre-test was conducted with 20 HWs to test the survey instrument, and subsequently with two HWs and one manager to review the newly developed interview guide.

Stage 2 aimed to pilot the quantitative and qualitative research instruments in a district in Bac Giang province. It also aimed to explore the relevance of the

conceptual framework in the Vietnamese context and determine how to adapt culturally specific terminologies, concepts and definitions in the research tools. *Quantitative research* was conducted to validate quantitative instruments, including a self-administered questionnaire suitable for the maternal health (MH) workforce. Sixty-five MH workers were sampled in the piloted district. Results from this survey helped to refine the quantitative instruments in terms of content and survey design. Survey design changed as a result of the pilot. *Qualitative research* was conducted to further develop the conceptual framework and to guide the development of instruments in the main study. Six interviews with HWs and managers were conducted to pilot the interview schedule.

Phase 3 was the main study, employing the instruments that had been modified and adjusted from the pilot study. This phase applied a mixed-methods approach, involving a combination of quantitative and qualitative research. The developed conceptual framework was used as the basis of data collection and analysis.

The final survey involved 262 MH workers in Bac Giang and Lao Cai. The data collected included socio-demographic information of MH workers, training opportunities that they had been offered in the preceding 12 months, their self-reported ability to perform essential obstetric care services (EOCs); and motivation outcomes.

The final qualitative research involved 41 respondents (excluding two informants at the central level) who were provincial administrators, district health managers, heads of commune health centres (CHCs) and MH workers. The content of the interview guide covered topics such as the advantages and disadvantages of the work environments; the influence of existing policies and governance framework on HWs and the management of the health workforce at the district and commune levels; and the capacity of a health facility to provide EOCs according to the National Guidelines.

Results

The study showed that there were differences between Bac Giang and Lao Cai provinces in terms of MH workforce and MH service utilisation. The district health organisation of the two provinces in general were similar, except that all CHCs in

Bac Giang were under the supervision of the District Health Centre while CHCs in Lao Cai were still under the management of the District Health Bureau. The HWs in Bac Giang were likely to have higher qualifications and more experience than those in Lao Cai, whereas HWs in Bac Giang had fewer opportunities to undertake further in-service training. Compared to Lao Cai, a higher proportion of pregnant women in Bac Giang delivered at a health facility, had a birth assisted by skilled HWs and experienced more than three antenatal care episodes.

The overarching argument in this thesis is that governance framework and other external factors positively and negatively influence motivation, competencies and performance of the health workforce. Motivation and competencies of the HWs are classified as *individual level factors* and are significantly connected to providing desired health-related outcomes.

As there was no measure or scale of motivation tested and widely used in Vietnam, it was necessary to modify and validate the existing instrument. The validation of the motivation scale showed that the instrument was relatively suitable for rural and mountainous settings of Vietnam with minor changes in the constructs. Six constructs in the validated scale included Job Satisfaction, Conscientiousness, General Motivation, Workplace Relation, Burnout and Timeliness and Attendance. On analysis, overall reliability (Cronbach's alpha of 0.77) of the individual constructs was in the range usually considered acceptable.

In multivariate analysis, motivation scores were significantly and independently associated with gender, ability to perform EOCs, frequency of night shifts and training opportunities. Female workers were found to be more motivated compared to the males (β=0.13, p= 0.05). MH workers who were able to perform more EOCs tended to have higher motivation scores (β=0.21, $p<0.01$). Participants who had more frequent shift schedules reported lower motivation scores (β= -0.15, $p<0.05$). HWs who had access to training courses in the preceding 12 months were less motivated than their peers who did not receive training (β= -0.14, $p<0.05$).

With regard to HW competencies, the study showed that MH workers lacked in-service training opportunities and had relatively low qualifications. In multivariate

analysis, the variables ‘Training Opportunities’ and ‘Work Experience’ had the most significant effects on reported ability to perform specific EOCs.

The contextual factors which included geographical conditions, client expectation and ethnicity also had a strong impact on HWs though the impact was indirect through an intermediate factor, service utilisation. In both provinces, while the reason for low service utilisation varied, low utilisation led to less opportunity for maintenance of technical skills and ultimately caused low motivation and poor performance.

Another level of factors that were of clear importance to HW competencies, motivation and performance were *the organisational factors,* which included human resource availability, training opportunities, salaries and supplements, and health facility infrastructure and resource availability. Staff shortages were confirmed to exacerbate workload and work-related stress on HWs. Moreover, deficiency of HWs at the district level resulted in lower quality of supervision provided to the commune level. Lack of specialist training and unavailability of resources, coupled with inadequate salaries and supplements were perceived by respondents to affect HW motivation, competencies, and performance. Three main channels whereby organisational factors affect HW performance were found. They directly influenced performance through competencies and motivation and service utilisation.

The governance framework and health-related policies also influenced motivation, competencies and performance of the health workforce. These factors affected HWs through their impact on organisational processes and human resource management (HRM) practice. First, the district health reform that began in 2004 reportedly resulted in many management issues including staff shortages, ill-defined responsibilities and ineffective collaboration among district health units. These ultimately affected the performance management of commune health workers (CHWs) and the operation of CHCs as well. Second, the current governance framework was considered to affect the HRM practice of health facilities. The study found that there were restrictions imposed on health managers in carrying out HRM functions, including recruitment of staff, evaluation and management of staff performance, and employment termination. These issues influenced the morale of managers and the motivation and performance of HWs.

Conclusion

This theory-based research identified three different levels of factors influencing competencies, motivation, and performance of MH workers in the rural and mountainous settings. Results were largely consistent with findings of previous research. These factors included characteristics of HWs (individual level factors), characteristics of health facilities (organisational level factors), and the characteristics of the broader context (contextual factors and governance framework).

This is the first study to look at the health workforce in the MH context in Vietnam and one of the few studies looking at the governance of the health workforce at the district level in Vietnam. This research provides better understanding of factors influencing the health workforce in terms of motivation, competencies, and performance; and provides valuable information for policy makers to enhance governance approaches to human resources for health policy implementation at the national and local levels. This is also likely to be relevant for policy and practice for the health workforce and MH services in other developing countries. At another level it also contributes to theory, through the description and testing of a new model, and validation of instruments used in Vietnam. From a public health perspective, the research aligns with processes towards achieving MDGs related to MH and therefore potentially contributes to improving MH outcomes.

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List of Abbreviations

ANC	Antenatal Care
ASEAN	Association of Southeast Asian Nations
CHC	Commune Health Centre
CHW	Commune Health Worker
CPFP	District Centre of Population health and Family Planning
CPC	Commune People's Committee
DH	District Hospital
DHB	District Health Bureau
DHC	District Health Centre
DPC	District People's Committee
Dept.	Department
EFA	Exploratory Factor Analysis
EOCs	Essential Obstetric Care services
GAVI	Global Alliance for Vaccines and Immunisation
GPA	Grade point average
GSO	General Statistics Office
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
HR	Human Resource
HRH	Human Resources for Health
HRM	Human Resource Management
HW	Health Worker
MCH	Maternal and Child Health
MD	Medical Doctor
MH	Maternal Health
MMR	Maternal Mortality Rate
MOH	Ministry of Health

NG	National Guidelines
NDCP	Decree of Government
NDTTg	Decree of Prime Minister
OB/GYN	Obstetrics and Gynaecology
PDIA	Provincial Department of Internal Affairs
PHD	Provincial Health Department
PPC	Provincial People's Committee
QD-TTg	Decision of Prime Minister
QD-BYT	Regulation of Ministry of Health
RH	Reproductive Health
SPSS	Statistical Package for the Social Sciences
TTLT	Joint Circular
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UNDP	United Nations Development Program
VND	Vietnam Dong
WHO	World Health Organisation

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

QUT Verified Signature

Signature:

Date: _____22th April 2015_____

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Chapter 1: Introduction

1.1 RATIONALE OF RESEARCH

In Vietnam, while noteworthy improvements in maternal health (MH) have been accomplished, maternal deaths are still unacceptably frequent, particularly in the disadvantaged regions (United Nations Population Fund, 2007a). Some of the reasons for the slow progress in achieving the Millennium Development Goals (MDGs) include poor management capacity, reduced accessibility to quality basic and comprehensive emergency obstetric care, poor implementation of policies, poor accountability of human resources in rural areas, fragmentation of care and lack of referral systems, unavailability of MH workers and little or no supportive supervision of lower levels (UNFPA/PATH, 2006; United Nations Population Fund, 2007a, 2007c).

It is worthwhile noting that the particular characteristics of the health workforce can have an impact on the effectiveness, quality, efficiency and equity in the provision of health services (Vietnamese Ministry of Health and Health Partnership Group, 2009). Similarly in MH care, the availability of skilled HW is critical in assuring high quality antenatal, delivery, emergency obstetric and post-natal services (Gerein, Green, & Pearson, 2006; United Nations Population Fund, 2006b). Therefore, good governance of the health workforce will help improve the quality of health care, assure equity in health, and improve efficiency in the use of health resources. Nonetheless, good governance seems to have been a neglected issue in the field of human resources for health (HRH) (Dieleman, Shaw, & Zwanikke, 2011).

Among the studies examining the determinants of HW motivation, only a few studies link motivation to performance and quality of services (Franco, Bennett, Kanfer, & Stubblebine, 2004; Mbindyo, Blaauw, Gilson, & English, 2009; Mutale, Ayles, Bond, Mwanamewenge, & Dina., 2013). Moreover, the evidence for the influence of individual factors (competency and motivation) on HW performance has not been gathered and most of the work in the area is theoretical (Rowe, de Savigny,

Lanata, & Victora, 2005). This project used an empirical approach to examine the relationship between individual level factors and performance.

The local level of government has the primary responsibility for the implementation of national health policies and for organising and managing health services (Ha Noi School of Public Health, 2009a). However, so far no research has examined the influence of governance and internal management on HRH at the district level in Vietnam. This study was designed to understand how governance issues influence competency, motivation, and performance of the health workforce for MH in rural and remote areas. Previous research into HRH has indicated that HW motivation and performance impact on the quality of health care and population health outcomes. Accordingly, this research has possible policy implications for improvement of the MH workforce in Vietnam and potentially in other similar countries.

1.2 RESEARCH AIM, QUESTIONS AND OBJECTIVES

The overall aim of this research is to provide a better understanding of the influence of different level factors (individual, organisational, contextual and governance-related) on HW motivation and performance. This research could inform policy to improve the governance of the health workforce in order to secure a qualified, motivated and competent health workforce. This study uses a mixed-method methodology that combines a quantitative survey, qualitative interviewing and document analysis (a detailed discussion of the methodology is presented in Chapter 4). Being a multidisciplinary project, this research encompasses governance of health systems, human resources for health, maternal health, and public health.

1.2.1 Research Questions:

1. What is the current quantity, quality, and organisational structure of the maternal health workforce at the commune and district levels in Vietnam, and how much does it vary at the district level?
2. How do individual factors, such as motivation and competency affect the performance of the maternal health workforce at the commune and district levels?

3. How do the external factors, including organisational, context and governance-related issues at provincial and district levels affect the maternal health workforce in Vietnam?
4. From the perspective of human resources for health, what aspects of the health system governance could be strengthened to improve maternal health services?

1.2.2 Research Objectives:

With regard to Question 1,

a) To identify the availability and qualifications of MH workers at the commune and district levels in two provinces.

With regard to Question 2,

b) To identify the self-rated ability of MH workers to provide essential obstetric care services and the barriers to providing these services.
c) To compare two study provinces in terms of availability, qualifications, and organisation of the MH workforce.
d) To validate the instrument for measuring motivation of Vietnamese health workers.

With regard to Question 3,

e) To identify from data what external factors are perceived to relate to the MH workforce working at the commune and district levels in Vietnam.
f) To identify the similarities and differences between the two study provinces in terms of external factors and their influences on the performance of the MH workforce.

With regard to Question 4,

g) To understand how the existing governance framework influences individual factors through organisational factors.
h) To propose recommendations to improve human resources in the Vietnamese health system, especially in the MH area.

To best answer these research questions, a conceptual framework of factors influencing health worker motivation and performance was set out, drawn from

existing theories and literature. The detailed development process for the conceptual framework is described in Chapter 3.

1.3 SIGNIFICANCE OF RESEARCH

This is the first study to look at the health workforce in the MH context in Vietnam and one of the few studies looking at the governance of the health workforce at the commune and district levels in Vietnam. This research provides better understanding of the factors influencing the health workforce in terms of motivation and performance, and provides valuable information for policy makers to enhance governance approaches to HRH policy implementation at the provincial and district levels. The study also adds to research into the health workforce and MH services in developing countries. At another level it also contributes to theory, through the description and testing of a new model, and validation of instruments used in Vietnam. From a public health perspective, the research aligns with processes aimed towards achieving MH-related MDGs and therefore potentially contributes to improving MH outcomes.

In order to provide an overarching argument as to factors affecting HW competencies, motivation, and performance, the context in which the study was conducted should be understood. Such information includes the political system, the health systems, and the progress of Vietnam towards achieving the maternal and child health-related MDGs. These will be described in the next sections of this chapter.

1.4 THE POLITICAL SYSTEM

Concerning political hierarchy, the State Government of the Socialist Republic of Vietnam is the central organisation and the pillar of the political system. The State Government regulates society by laws passed under the leadership of the Communist Party of Vietnam. The National Assembly is the highest-level representative body of the people and the highest organ of state power of the Socialist Republic of Vietnam and exercises three main functions: to legislate; to decide on important national issues; and to exercise supreme supervision over all activities of the State. The State President is the Head of State, elected by the National Assembly of Vietnam. The Government is the highest body of State administration of the Socialist Republic of Vietnam and is headed by the Prime Minister.

Regarding the current legal document system in Vietnam, primary legal documents are passed by the National Assembly, and these consist of the constitution, laws, resolutions, and ordinances. Secondary legal documents, such as orders, decisions and decrees, issued by the Prime Minister or the Government, are of a lesser weight than those issued by the central legislation (Hanoi School of Public Health, 2012). The ministries develop circulars or joint circulars (with other ministries), which provide detailed guidelines for the implementation of the National Assembly and the secondary legal documents, specify technical standards, procedures, and set technological and economic standards for the sectors they administer (Hanoi School of Public Health, 2012).

The administrative system is divided into four levels: national, provincial, district and commune, which are in a hierarchical order from top to bottom. Beginning vertically, the Central Government and the National Assembly are at the top and charged with approving the state health budget, health policies, and all health-related issues. At the central level, the Ministry of Health (MOH) is responsible for the health sector and reports directly to the Government Office and the National Assembly. The People's Committees at the different levels (e.g. Provincial People's Committee) are local authorities that are significant. For example, at the operational level, the People's Committees allocate budgets for the health sector, issue and approve provincial policies based on national guidelines, and direct the Provincial Health Departments (PHD) in their management of the provincial health system.

1.5 THE VIETNAMESE HEALTH SYSTEM

1.5.1 The organisation of the Vietnamese health system

The health system of Vietnam is organised in four layers that parallel the state administration system. The health sector is led by the MOH which is on the top level and the other health bodies are underneath. The organisation of the health sector is depicted in Figure 1.1.

Central level

The MOH is the central government agency that is in charge of the state management of health care, protection, and promotion of the people's health and of

public health services. The MOH has 70 subordinate institutions in three main areas: curative institutes (hospitals), preventive medicine and specialist institutes, and medical colleges and universities. The Maternal and Child Health care (MCH) department is in charge of all issues related to maternal and child health. At this level, two national hospitals of Obstetrics and Gynaecology (OB/GYN) in Hanoi and Ho Chi Minh cities are the leading agencies responsible for technical assistance for maternal health in the country.

Provincial level

The PHD works under the leadership of the Provincial People's Committee (PPC), and performs tasks and fulfils obligations as authorised by the Provincial People's Committee for the health sector. The PHD has functional departments such as the Medical Professional Affairs Department, the Pharmaceutical Professional Affairs Department, the Finance and Accounting Department and the Health Inspectorate. Their tasks are to ensure that all health care facilities follow the rules and procedures of medical ethics (USAID, 2009). The PHD is responsible for the management of all health care services including curative services, preventive medicine, health protection, and promotion. At a provincial level, the OB/GYN departments of the provincial hospitals or OB/GYN hospitals are the leading technical agencies in MH in the province. They are also responsible for technical support for MH services, which are focused on district and commune levels.

District level

At the district health level, the District Health Bureau (DHB), the District Hospital (DH), and the District Health Centre (DHC) are independent district health units. Currently there are 697 districts, of which 233 have district health centres that combine examinations with treatments and preventive medicine functions. More than 490 have district health centres with preventive medicine functions and district hospitals with curative functions that operate separately (Vietnamese Ministry of Health and Health Partnership Group, 2012).

The District Health Bureau, a professional agency under the management of the District People's Committee (DPC), works to advise the DPC on the state management of the local people's health care, protection, and promotion, and

performs designated tasks and obligations as authorised by the DPC and the PHD. The DHB works under the control of the DPC in terms of direction, organisational management, payroll, and operations, but is also under the control of the PHD in terms of technical direction, guidance, monitoring, and inspection. The DHBs are also in charge of private health clinics in their localities.

The District Hospital and the District Centre of Preventive Medicine were split from the former District Health Centres by Decree 172 (Vietnamese Government, 2004), and are now under the stewardship and management of the PHD. One of a District Hospital's functions is to provide examinations and treatment services to the local population. Its Department of Obstetrics is in charge of MH and the Department of Internal Medicine and Paediatrics is in charge of newborn and child health care. DHs serve as the first referral point for the commune health centres (CHC) within the district.

The District Health Centre (previously called the District Health Centre for Preventive Medicine) is responsible for national health programs (vertical programs, including reproductive health programs) through its Reproductive Health (RH) Department. Apart from its role to supervise CHCs in all vertical programs, in many provinces DHC also manages CHC personnel. The specific means of supervising CHCs in each study province will be introduced in Chapter 8.

Commune level

The primary care facilities network is considered a grassroots level network that provides healthcare services to all districts and communes (USAID, 2009). Therefore, all DHCs, DHs, and CHCs are defined as health facilities at the grassroots level. The CHC is designated to provide primary health care, carry out activities for early detection of epidemics, provide care and treatment for common diseases and normal deliveries, and mobilise people to use family planning, practice preventive hygiene and participate in health promotion. These activities are under the administrative management of the DHB and the Commune People's Committee (CPC), and receive technical support from the DH and the DHC. In principle, in each CHC there should be at least one midwife or an assistant doctor having specialisation in obstetrics and paediatrics, who is in charge of maternal services. In reality, one

CHC may serve from 2000 to 10,000 people, depending on the regions or levels of deprivation.

1.5.2 The private health sector

During the *Open policy* (Doi moi) period, starting from the end of the 1980s, a variety of policies were publicised including the policy on private health practice with a view to increasing resources. This policy was inaugurated in 1989 by Decision 94/BYT/QD, dated 08/03/1989 by the Ministry of Health, and the Ordinance on private health practice, issued by Order of the President 26/L/CTN, dated 13/10/1993 (Vietnamese Ministry of Health and Health Partnership Group, 2009).

The private health sector has received more attention from the government in order to promote its development. As reported by the MOH's Department of Administration for Examination and Treatment, over an 8 year period the number of private hospitals increased steadily from 40 in 2004 to 150 in 2012 and the number of hospital beds have increased to 9611 in 2012 (Vietnamese Ministry of Health and Health Partnership Group, 2013). Since the Law on Examination and Treatment took effect in 2011, the licensing of establishments and/or individuals has not been fully applied to public and private practitioners in Vietnam. For example, there is not yet a mechanism required for renewal of licensing. With respect to the quality of health care services, there is a need for better governance of the private health sector (United Nations Development Programme, 2010) but this is not the focus of this research.

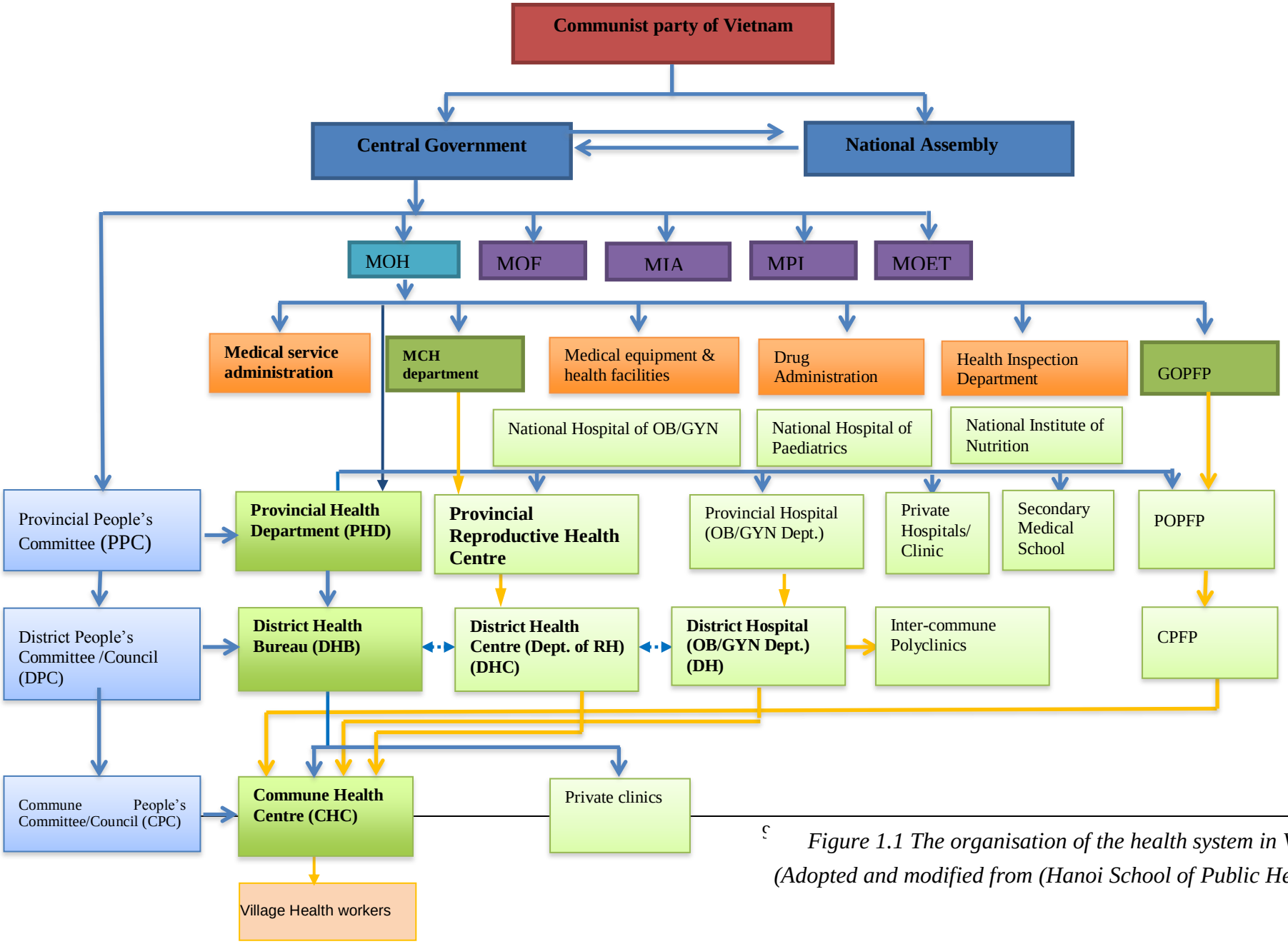
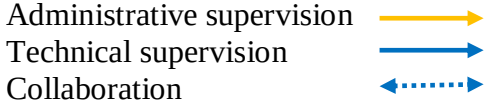


Figure 1.1 The organisation of the health system in Vietnam (Adopted and modified from (Hanoi School of Public Health, 2012)

Note: The abbreviations used in the figure
MOH: Ministry of Health
MOF: Ministry of Finance
MIA: Ministry of Internal Affairs
MOET: Ministry of Education and Training
GOFP: General Office of Population and Family Planning
POFP: Provincial Office of Population and Family Planning
DCFP: District Centre of Population and Family Planning



1.5.3 Health policy development

In recent years, the Ministry of Health has collaborated with other ministries to develop many draft laws, ordinances and health programmes, as well as a master plan for health system development. In the process of developing legal documents in the health sector, many inter-sectoral workshops have been undertaken to increase participation of experts from different areas and from health partners as well (Vietnamese Ministry of Health and Health Partnership Group, 2012). However, the policy making process has often failed to fully incorporate all the contributions from relevant stakeholders, especially the public and social community organisations and people in some localities (Vietnamese Ministry of Health and Health Partnership Group, 2009; Vietnamese Ministry of Health and Health Partnership Group, 2012). For example, the Law on Examination and Treatment which was developed in 2011 stipulates that a license to practice should be granted on the grounds of experience, rather than competencies, and also that HWs need only to work for five years to be granted a license for life. Not surprisingly, this law has raised concerns amongst health partners. The development of this important law saw very little participation of health professionals, patient groups or the private sector (United Nations Development Programme, 2010). Moreover, it is likely that health policy development has been centralised at the MOH (United Nations Development Programme, 2010) though there has been a space for local context interpretation in terms of resources allocation.

1.5.4 Health financing and the health insurance system

Vietnam's health system is financed from a mixture of sources including state funding and external resources. State budget funds allocated to the health sector are one component of public health expenditure and play a critical role in implementing the state functions of protecting public health and ensuring equity in health care. Other components include health insurance funds and external assistance such as through aid agencies (Vietnamese Ministry of Health and Health Partnership Group, 2008). Health financing is decentralised and the state budget for health is allocated through the central budget and local budgets according to State Budget Law No. 01/2002/QH11 issued by the National Assembly. The state budget for health is estimated based on the population size with coefficients to adjust the amount by

region according to Prime Ministerial Decision No. 151/2006/QD-TTg. At the provincial level, concrete budget allocation norms for preventive medicine, curative care, or for types of hospital are determined by the PPC based on the government budget allocation norms, fiscal capacity, and conditions in the locality. In reality, the majority of provinces still rely on traditional budget allocation methods which calculate funds based on number of beds and staff (for curative care) and according to population size for preventive medicine facilities. They have not yet taken into account the quality of services provided or performance standards maintained (Vietnamese Ministry of Health and Health Partnership Group, 2010).

The public share of health expenditure includes the state budget, foreign aid, and public health insurance. Total government spending on health has increased from 27% in 2007 to 44.6% in 2010. At the same time, out-of-pocket expenditure has slightly reduced from 55.6% in 2007 to 47.6% in 2010 (Vietnamese Ministry of Health and Health Partnership Group, 2008, 2012).

Public health insurance consists of compulsory and voluntary types. Compulsory insurance applies for those who are employed, students and pupils, children under 6 years old, the ethnic minority people; and low and very low income earners. Voluntary insurance is available for self-employed people only. In 2007, it was estimated that about 36.5 million people were covered by health insurance, covering about 42% of the population. This number increased to 59.31 million people by 2012, equivalent to 66.8% of the population.

Health insurance pays health facilities for drugs and services provided to enrolled members. The health insurance agencies apply a ceiling to total reimbursements at district hospitals and CHCs. In addition, district health insurance funds are used to pay provincial and central facilities for referred patients, which results in the consumption of a high proportion of the budget. The ceilings are imposed on district hospitals and at the grassroots level, and hence these facilities must limit the benefits they provide to patients to ensure that costs do not exceed reimbursements (Vietnamese Ministry of Health and Health Partnership Group, 2009). This leads to a perception that the services provided at these levels are not as comprehensive as they could be. In addition, HWs at district levels are limited by technical assignment regulation in the treatments they can perform, which leads to

disempowerment in the efficient use of the skilled workforce. Therefore, health insurance schemes exacerbate the problem of by-passing, which causes overload at higher levels and low utilisation at lower levels (Witter, Bui, Shengalia, & Vujicic, 2011).

1.6 GLOBAL PROGRESS TOWARDS ACHIEVING MATERNAL HEALTH RELATED MILLENNIUM DEVELOPMENT GOALS

With regard to the MDGs established by the United Nations, there are two MDGs, namely MDGs 4 and 5, related to maternal and child health. MDG 4 aims to reduce child mortality, or more specifically to reduce the under-five mortality rate by two thirds, between 1990 and 2015. MDG 5 aims to improve MH, with two targets 1) to reduce by three quarters the maternal mortality ratio by 2015, and 2) to promote universal access to RH services.

Over the last two decades, the global maternal mortality rate (MMR) reportedly declined 47 per cent, from 400 maternal deaths per 100,000 live births in 1990, to 210 in 2010 (United Nations, 2013). While all regions have made progress in the achievement of this maternal health goal, nearly 50 million babies worldwide have been reported to have been delivered without skilled care (United Nations, 2013). Women who give birth in rural and remote areas are still at a disadvantage in terms of the care they receive. There is a significant gap between urban and rural settings in terms of the coverage of skilled birth attendants, with 53 percent of rural women receiving skilled attendance at delivery, compared to 84 per cent of women in urban areas (United Nations, 2013).

It has been broadly acknowledged that three quarters of all maternal deaths occur during delivery and the immediate post-partum period. Therefore “the single most critical intervention for safe motherhood is to ensure a competent health worker with midwifery skills is present at every birth, and transport is available to a referral facility for obstetric care in case of emergency” (Vietnamese General Statistic Office, 2011, p. 137). For pregnant women, improved access to emergency obstetric care and assistance from skilled health workers at delivery were considered crucial to meeting the MDG target of reducing the maternal mortality ratio by three quarters (United Nations, 2013).

A number of strategies to accelerate progress towards improving maternal health have been proposed. In particular, the global initiative aimed to support strengthening of national health systems in developing countries, in order to deliver integrated quality services with a focus on the community level and to the underserved regions. In addition, strategy to address the critical shortages of health workers was also one of the focal points of the Global Strategy for Women's and Children's Health (United Nations, 2010).

1.7 VIETNAM'S PROGRESS TOWARDS ACHIEVING MATERNAL HEALTH RELATED MILLENNIUM DEVELOPMENT GOALS

In Vietnam, the achievements in addressing maternal and child mortality over the last two decades have been remarkable, with mortality showing a steady decline (United Nations Population Fund, 2007a). The RH indicators in general, and maternal and infant mortality rates in particular, are considered positive compared to other developing countries experiencing similar social and economic growth (Vietnamese Ministry of Health, 2011a).

Concerning MDG 4, the infant mortality rate (IMR) dropped from 44 per 1,000 live births in 1989 to 15.4 per 1000 live births in 2012 and is likely to decline by 0.6 per thousand by 2015 to meet the MDG (Vietnamese Ministry of Health and Health Partnership Group, 2013). An impressive result was achieved in reducing the mortality rate of children under five (U5MR) from 58‰ in 1990 to 23.2‰ in 2012. Nonetheless, in order to reach the target set by the MDG, child mortality rates would have to reduce by another 3.9 per thousand live births by 2015. This task is anticipated to be extremely difficult.

In relation to MDG 5, the MMR per 100,000 live births has decreased significantly, from 233 deaths in 1990 to 69 deaths in 2009. However, this indicator is hard to assess regularly due to the lack of updated and reliable data. The MMR in 2011 was 66 per 100,000 live births (United Nations Children's Fund, 2013a) and it is expected to be 58.3 in 2015 (Vietnamese Ministry of Health and Health Partnership Group, 2013). It is evident that the country will meet its MDG 5. Detailed information is set out in Table 1.1.

Table 1.1 Achievements of Vietnam in maternal and child health

Indicators	**Unit**	**2001**	**2004**	**2007**	**2010**	**2015****
Total fertility rate (%)	Percentage	2.25	2.23	2.08	2.00	1.86
Maternal mortality rate*	Per 100,000 live births	95	85	75	70	58.3
Infant mortality rate*	Per 1,000 live births	29.5	18	16	15.8	14.8
Under 5 mortality rate*	Per 1,000 live births	42	28.5	NA	23.3	19.3
Low birth weight (under 2500 gram)	Percentage	7.1	5.8	5.1	6	NA
Malnutrition rate for children under five*	Percentage	31.9	26.6	NA	17.5	15.5

Note: 2015**: The targets or objectives set for this year

**indicates that these indicators are also Millennium Development Goals*

Source: (Ha Noi School of Public Health, 2009b; Vietnamese Ministry of Health and Health Partnership Group, 2009; Vietnamese Ministry of Health and Health Partnership Group, 2013)

In addition to RH related MDGs, Vietnam has continued to see progress in the past years in relation to national health program targets. In 2011, the Prime Minister promulgated the Decision 2406/QD-Ttg dated 18/12/2011, which incorporated a list of 16 national target programs including a national health target program. Maternal health and antenatal care achieved and exceeded the targets in 2012. The proportion of women giving birth who received three or more than three antenatal episodes during their child bearing period increased to 89.4% in 2012 (Vietnamese Ministry of Health and Health Partnership Group, 2013). The proportion of women who were assisted by skilled birth attendants during childbirth has been maintained at an average of 97% since the 2010-2012 period, though the Multiple Indicator Cluster Survey (MICS) reported that this figure was 92.9% in 2011 (United Nations

Children's Fund, 2013b). Overall, the utilisation of MH services has increased remarkably, as illustrated in the table below.

Table 1.2 Maternal health service utilisation in period 2009-2012

Services utilised	**2009**	**2010**	**2011**	**2012**	**2015***
Proportion of women giving birth who had 3 or more antenatal episodes	NA	79.2	86.7	89.4	80
Proportion of women giving birth who were assisted by skilled HWs	94.4	97.1	97.2	97.9	96
Proportion of pregnant women being fully vaccinated against tetanus	93.7	93.5	94.6	95.5	NA
Proportion of mothers and newborns receiving postpartum/postnatal care	89.2	87.8	87.2	87.3	85.0

Note: 2015: The targets or objectives set for this year*

Source: (Vietnamese Ministry of Health and Health Partnership Group, 2013)

Despite Vietnam having a good policy to improve access to health care for vulnerable groups, such as the poor, ethnic minorities and children under six, these groups still face other barriers to healthcare access. One of the barriers influencing utilisation of health care among vulnerable groups in Vietnam is the availability of health care services and the quality of health services (Tran, 2009). While there have been considerable achievements in terms of the whole country addressing maternal and child health, the MH services in some areas of Vietnam are of poor quality. Either access to these services is insufficient or the services are not of the appropriate technical standard In addition, a proportion of HWs have insufficient training (Ha Noi School of Public Health, 2009b; UNFPA/PATH, 2006).

Increasing accessibility to and availability of quality basic emergency obstetric care services among poor women and their families by improving the quality of services provided by the district and commune health care system was one of the recommendations of the United Nations (United Nations, 2008). However, the provision of these essential services remains problematic at the district and commune

levels, particularly in rural and mountainous areas. Apart from the inadequacy of infrastructure and poor resource availability, staff shortages in terms of quantity and quality were also considered an obstacle to progress.

1.8 THESIS ARGUMENT SUMMARY

This thesis argues that the performance of the MH workforce is influenced by individual factors (motivation and competencies), which are in turn influenced by external factors such as context, organisation and governance framework. This relationship is supported by data that has been gathered during the course of the research and is broadly consistent with the literature at both theoretical and applied levels. This research argues that some reforms at the governance system in Vietnam may strengthen the capacity of that system's workforce to perform according to expected standards, and so strengthen the quality of MH services in Vietnam.

1.9 THESIS OUTLINE

Chapter 1 provides an introduction to this research, including the rationale, aims, objectives and implications of the research. In addition, it also provides the background information on the Vietnamese context, including the political and health systems, in order to support arguments and discussion in other chapters. Chapter 2 is a review of the literature on the health workforce and governance of the health workforce, which also introduces the concepts and definitions of HRH and governance of HRH. The key challenges for human resources for health in the global context and in Vietnam are also described in this chapter. Chapter 3 presents the conceptual framework used as the basis for this research. The conceptual framework discussed in Chapter 3 suggests that external factors (including contextual, organisational, and governance-related factors) influence individual factors and also, that the governance framework (and health-related policies) affects the organisational factors. In this chapter, factors at different levels are explained, as well as the relationships among these factors. Chapter 4 is a description of the mixed methods applied to answer the research questions and to test the model set out in Chapter 3. Quantitative research, through the use of a survey, was conducted to explore the availability, competencies and motivation of HWs, while qualitative research aimed to provide a better understanding of the influence of organisational factors and broader contextual factors on HW motivation and performance. Chapter 5 provides

the results of the survey explained in Chapter 3 and also describes the characteristics of the study provinces, in terms of geographical and population conditions, MH workforce and MH service utilisation. Chapter 6 presents the results with regard to the individual level factors affecting HW performance. Results of multiple regression analyses were used to explain the relationships between training opportunities, competencies and motivation outcome. Chapter 7 introduces the influence of contextual factors on HW competencies, motivation and performance, and compares the two provinces in terms of some contextual factors. Chapter 8 examines the links between governance frameworks and HW competencies, motivation, and performance. Chapter 9 describes the perceived impact of organisational factors on HW motivation and performance. The causal links between these factors and HW competencies, motivation, and performance are also provided. Chapter 10 integrates findings, discusses the applied implications for future policy development and suggests directions for future research into the governance of the health workforce.

This introduction has provided an overview of the rationale, aims, and objectives of the research study. It also provides background information on the Vietnamese context so that readers may better follow the discussion throughout the whole thesis. In Chapter 2, continues more detailed information about human resources for health and governance of human resources for health will be provided.

Chapter 2: Human Resources for Health

2.1 INTRODUCTION

In discussing the governance framework for the workforce that provides maternal health (MH) services in Vietnam, it is important first to understand the general issues that affect workforce governance at a global level. This chapter introduces the picture of human resources for health (HRH) in a global context and in Vietnam particularly, and the issues of governance of health workforces. Section 2.2 will introduce the major challenges for global health workforces and describe the important role of health workforces to deliver good quality health services and achieve Millennium Development Goals (MDG). The current state of the Vietnamese health workforce and the key challenges are described in section 2.3. This is followed by a discussion of the concept of governance and governance of human resources for health in section 2.4. The following section introduces several policies that relate to HRH in Vietnam.

2.2 HUMAN RESOURCES FOR HEALTH IN THE GLOBAL CONTEXT

2.2.1 Health workforce - major challenges

Workers in health systems around the world have experienced increasing stress and insecurity (World Health Organisation, 2006). In particular, health sectors in developing countries have faced a wide variety of systemic pressures in recent years. These have included a movement towards the marketisation of health services, civil service restructuring, decentralisation and increasing geographical and socioeconomic disparities in many developing countries (Fritzen, 2007). In addition, the spreading HIV/AIDS epidemic imposes significant work burdens, risks and threats. The consequent workforce crisis in many of the poorest countries is characterised by severe shortages, inappropriate skill mixes, and gaps in service coverage (World Health Organisation, 2006). Some countries are experiencing depletion of their workforces due to emigration, HIV-related illness and the increasing movement from public to private health facilities, and international health and development organisations.

Several constraints face the health workforce in the delivery of interventions aimed at achieving health-related MDGs. National and international reports into common problems affecting the development of health human resources resulted in the identification of seven main issues (Chen et al., 2004; Kanchanachitra et al., 2011; Vietnamese Ministry of Health and Health Partnership Group, 2009; Vietnamese Ministry of Health and Health Partnership Group, 2012; World Health Organisation, 2006). These include 1) unavailability of skilled HWs and uneven distribution of HWs at different levels of service delivery 2) low staff motivation 3) lack of supportive supervision from facility managers and leaders 4) unsafe conditions in the workplace and inferior policies and practices for human resources development, such as poor career structure, working conditions and remuneration 5) inappropriate training, with curricula that are not needs-based 6) lack of a staff performance evaluation system and 7) lack of information on human resources and knowledge of the impact of human resource policies that hinder the ability to plan and develop policies effectively.

As a part of the world health system, Southeast Asian countries have been facing diverse health workforce challenges, even though the shortage of HWs at the regional level is not so acute. Vietnam is one of the five countries in the ASEAN region, that falls below the WHO threshold of 2.28 doctors, nurses, and midwives per 1000 population, the others being Indonesia, Laos, Cambodia and Myanmar (Kanchanachitra et al., 2011). Most countries in the region face pressures to increase the availability of a qualified and motivated health workforce in order to meet the needs of the population (Kanchanachitra et al., 2011). As in other regions in the world, many countries in Southeast Asia face persistent challenges in the deployment and retention of doctors, nurses, and midwives to rural and remote areas, resulting in a high degree of inequality in the distribution of the health workforce (particularly medical doctors) across provinces and regions.

2.2.2 The important role of the health workforce in achieving the Millennium Development Goals

It is now widely accepted that the shortage of HWs in many countries is among the most significant constraints to achieving the three health-related MDGs: to reduce child mortality, improve MH, and combat HIV/AIDS, malaria and tuberculosis (World Health Organisation, 2006). In particular, the HRH at the

grassroots level, plays an important role in providing primary healthcare, which include MH services.

The World Health Organisation suggests that healthcare workers are the personification of a system's core values: they heal and care for people, ease pain and suffering, prevent disease and mitigate risk (World Health Organisation, 2006). Developing a health workforce that is capable, motivated and supported is essential to overcoming bottlenecks to achieving national and global health goals. "When these workers are capable, well equipped, accountable and motivated, they perform their responsibilities with distinction; where this is not the case, quality may not only suffer but various negative consequences may ensue" (World Bank, 2006, p. 1). As discussed in the subsequent chapter, the motivation and performance of the MH workforce are the focal point of this study.

In the MH area, human resources can be considered a critical factor to achieving the MDG of improving MH in part by reducing the maternal mortality rate (MMR). The causes of maternal mortality and morbidity are well known, and mainly result from the inability of a health system to deal effectively with complications, especially during or shortly after childbirth (World Health Organisation, 2005). The availability of skilled health providers is critical in assuring high-quality antenatal, delivery, emergency obstetric and post-natal services. The MDG of improving MH is unlikely to be achieved without attention to the recruitment and retention of health professionals (Gerein et al., 2006).

2.2.3 The relationship between the maternal health workforce and the quality and safety of maternal health services

There has been a broad agreement that MMR is likely to be significantly influenced by the MH workforce. This is because the medical interventions to prevent maternal deaths are dependent on implementation by qualified personnel (Anand & Bärnighausen, 2004). Results of a variety of international and domestic reports and papers have shown a relationship between the MH workforce and the quality and accessibility of MH services (Dogba & Fournier, 2009; Gerein et al., 2006; Gupta et al., 2011; United Nations, 2008).

A regression analysis of data from 117 countries found that doctor, nurse and midwife densities were significantly related to MMR, after controlling for per capita

income, female literacy and absolute poverty (Anand & Bärnighausen, 2004). This research suggested that HW density had an important impact on improving certain health outcomes (Anand & Bärnighausen, 2004). Having an appropriate skill mix and effective team working for safe delivery are also suggested to be important factors in reducing maternal mortality (Gerein et al., 2006).

A recent study from Tanzania shows that there are large variations in the availability of qualified HWs providing basic emergency obstetric care and comprehensive emergency obstetric care (EOC) in the different health service levels across districts. This difference is notable at both dispensaries (the health facility centre in the sub-district level, similar to a commune health centre in Vietnam) and first referral hospital levels (Olsen, Ndeki, & Norheim, 2005). Interestingly, this study reported that there was an association between the availability of qualified HR and the number of qualified EOC facilities. There was an increased likelihood that pregnant women would choose facilities with qualified personnel. This conclusion was confirmed by publications using Northern Tanzanian clinical data showing that patients voluntarily bypass low-quality services in favour of high-quality services (Leonard, K.L., Mliga, G.R., Haile, M.D. cited by Olsen et al., 2005).

In summary, the health workforce is a core component of any health system. In MH in particular, the MH workforce is critical to achieving MH-related MDGs. In Vietnam, although the achievements in addressing maternal and child mortality over the last two decades have been remarkable, with mortality showing a steady decline, maternal deaths in remote and disadvantaged regions have been unacceptably frequent. Therefore, it is important to strengthen the current MH workforce through human resource management (HRM) intervention such as adequate training, effective supervision and leadership.

2.3 HUMAN RESOURCES FOR HEALTH IN VIETNAM AND GOVERNANCE-RELATED ISSUES

Two decades after the *Doi Moi* (open policy) reforms began, Vietnam's health sector is facing tremendous challenges, including how to ensure equity in access to health care. It must meet these challenges against a background of rapid changes in the administrative, political and socioeconomic context of the country. For example, a program of significant administrative decentralisation and redefinition of the roles

of central ministries has been taking place across nearly all sectors (World Bank, 2006). The availability of a qualified health workforce is a crucial determinant of a health system's capacity to deliver services to the population. The aggregate level of human resources in Southeast Asia suggests no critical shortage, with a regional average of 2.7 doctors, nurses, and midwives (combined) per 1000 population. However, Vietnam is one of five countries (Cambodia, Indonesia, Laos, Myanmar, and Vietnam) that fall below the critical shortage threshold of 2.28 doctors, nurses, and midwives per 1000 population, as defined by the WHO. To meet the WHO threshold alone, an estimated additional 78,747 health professionals would be needed in Vietnam (Kanchanachitra et al., 2011).

2.3.1 The Health workforce in Vietnam

This section introduces Vietnam's achievement of targets set for the development of the health workforce in recent years. It then describes the different current training programs provided for MH workers in Vietnam.

In the Decision 122/QD-TTg, inaugurated in 10/01/2013 "Approval of National Strategy on people's health protection, care and promotion period 2011 – 2020, vision to 2030", the Vietnamese Prime Minister outlined the targets for the development of the health workforce. This policy announcement set the number of medical doctors per 10,000 people at 8.0 by 2015, increasing to 9.0 by 2020. The target set for the number of university-trained pharmacists per 10,000 people was 1.78, 2.0 and 2.2 by 2010, 2015 and 2020 respectively (Vietnamese Prime Minister, 2013).

Decision 122/QD-TTg also aimed to strengthen human resources at the grassroots level. It is striving to achieve the target by 2015 whereby 80% of CHCs will have medical doctors and 95% of CHCs will have midwives or obstetric/paediatric assistant doctors. By 2012, 76.0% of CHCs had medical doctors and 93.4% of CHCs had midwives or obstetric/paediatric assistant doctors, so these targets are likely to be achieved by 2015.

Vietnam's development of the health workforce in recent years has been a remarkable achievement. The number of doctors and assistant doctors per 10,000 people continued to increase from 12.52 in 2009 to 13.42 in 2010. The number of

medical doctors and the number of nurses per 10,000 of the population rose from 6.6 in 2009 to 7.56 in 2012, and from 8.8 in 2009 to 10.02 in 2011 (Vietnamese Ministry of Health and Health Partnership Group, 2012, 2013). According to statistics from the MOH, in 2010 the total number of HWs in the country was 344,876, of which 62,555 medical doctors accounted for 18.13% of the health workforce; 15,150 pharmacists made up 4.3%; 52,455 assistant doctors were equivalent to 15.2%; and 74.107 nurses and 25,289 midwives accounted for 21.4% and 7.3% of the total, respectively (Vietnamese Ministry of Health, 2010). Table 2.1 describes key development indicators of the health workforce in period 2009-2015.

Table 2.1 Key development indicators of the Vietnamese health workforce

Indicators	**2009**	**2010**	**2011**	**2012**	**2015***
Doctors per 10,000 people	6.59	7.20	7.33	7.46	8,0
University-trained pharmacists per 10,000 people	1.77	1.76	1.92	NA	1,8
Proportion of CHCs with doctors	67.7	70.0	71.9	76.0	80
Proportion of CHCs with obstetric/paediatric assistant doctors or a midwife	95.7	95.6	95.3	93.4	>95

Note: 2015: Target for this year*

Sources: (Vietnamese Ministry of Health and Health Partnership Group, 2013)

At present, the Ministry of Health issues 48 curriculum frameworks for the training of MH workers across 5 different levels (elementary, secondary, college, graduate and postgraduate). The current training curriculum available for the MH workforce is described in Table 2.2 which details the five levels of qualifications available with the corresponding required training times.

Table 2.2 The current training programmes to train maternal health workers

	Technical position	Training duration	Note
Postgraduate degree	Medical doctor specialized in OB/GYN	PhD: 4-5 years Master degree or specialist 1: 2 years	
University degree	General (regular) medical doctor	Regular program: 6 years	6-year training program conducted at medical universities. Students are required to take the course of OB/GYN, instructed by the Department of Obstetrics and Gynaecology, in the second term of year 4 and the first term of year 6.
	Medical doctors with obstetrics oriented training	10-month training on OB/GYN	Medical doctors required to attend the 10-month training program conducted at the national OB/GYN hospital.
	Upgraded medical doctor	Four-year full-time training program for assistant doctors.	This programme is for assistant doctors who have worked for a certain number of years. They have the opportunity to become doctors through in-service training. The Ministry of Health only trains doctors through in-service programmes in mountainous and remote areas (Vietnamese Ministry of Health and Health Partnership Group, 2009).
	University degree midwife or nurse	4 years	4-year training program at a medical university

	Technical position	Training duration	Note
College degree	College midwife or nurse (transition from vocational to university)	3 years	3-year training program provided by nursing and midwifery schools.
Secondary degree (equivalent to vocational training)	Assistant doctor	3 years	Students are required to have 3 years of training and after graduation, students are expected to be able to perform examinations and treatment. However, the health sector planned to limit the number of assistant doctor graduates and only allows for their training in 12 mountainous provinces (Vietnamese Ministry of Health and Health Partnership Group, 2009).
	Obstetric/Paediatric assistant doctors	6 months	The 6-month training program, conducted at the Institute of Military medicine, is to upgrade and specialise secondary military nurses and assistant doctors into Obstetric/Paediatric assistant doctors. This training program was conducted in Vietnam many years ago. While graduates of this program are still practicing, the program is no longer offered.
	Secondary midwife or nurse	2 years	

	Technical position	Training duration	Note
Elementary degree	Elementary midwife or nurse	6-12 months	Students are required to have 6 months or less than 12 months of training in programmes conducted at a midwifery or nursing school, or secondary medical school.

2.3.2 Key challenges for Vietnam's health workforce

As introduced in 2.3.1, Vietnam made progress in developing its health workforce during the period between 2009-2012 and is likely to achieve the targets set for 2015, according to the national strategy on developing the health workforce. However, the Vietnamese healthcare system faces several challenges with regards to the health workforce, including imbalance and maldistribution, limited quality and inappropriate management and utilisation (Vietnamese Ministry of Health and Health Partnership Group, 2009). These issues will be discussed in more detail in this section.

2.3.2.1. Imbalance and maldistribution

A serious shortage of HWs is prevalent in preventive medicine, the grassroots health care network, and in disadvantaged areas including mountainous, remote and isolated areas. Illogical distribution of the health workforce by region and area remains a pressing problem. In mountainous provinces, human resources for health have shown an increase at provincial and district levels while resources have stayed unchanged or even declined at the communal level. Low incomes for HWs are a major cause of shortages in the health workforce and of irrational distribution, migration of HWs in some locations and imbalance in areas of specialisation (Vietnamese Ministry of Health and Health Partnership Group, 2011).

The urban population accounts for 27.4% of the total national population, but a majority of university trained pharmacists (82%), and over half of all doctors (59%), and nurses (55%) work in urban areas. The Health Statistic Year Book (Vietnamese Ministry of Health, 2010) shows that 95.3% of HWs who hold post-graduate and 57.7% of HWs with university degrees are concentrated at the central and provincial levels. By contrast, the proportion of college and secondary degree HWs at the

commune and district health levels accounts for fewer than 55% of the total workforce. Large gaps in incomes and working conditions exist for HWs between the public and private sectors as well as within the state institutions at different levels.

A lack of regular medical doctors, especially in intensive anaesthetics in all district health facilities was reported. Similarly, the capacity of CHCs in terms of human resources and working conditions remains limited, which creates a barrier to providing safe motherhood services (United Nations Population Fund, 2007a; Vietnamese Ministry of Health and Health Partnership Group, 2012).

In summary, as aforementioned, Vietnam is one of five countries in the Southeast Asian region that falls below the WHO threshold of 2.28 HWs per 1,000 of the population. In addition, similar to other countries in the world and especially those in the Southeast Asia region, Vietnam has faced persistent challenges of the deployment and distribution of staff remote and disadvantaged areas. As a result, such areas typically have health workforces with lower-level qualifications.

2.3.2.2. Issues with qualifications of the health workforce

A lack of a qualified health workforce is a significant issue, as services of a sufficient quality cannot be produced or provided, which affects health outcomes. Although the quality of the Vietnamese health workforce has improved in recent years, it remains problematic. There are a limited number of HWs with higher qualifications, and there is a maldistribution of these HWs. HWs holding post-graduate qualifications (Master, PhD degrees) are mainly concentrated at the central and provincial levels. Most health managers who have clinical qualifications and skills have to combine management and clinical roles at the same time and that limits the time they can devote to either. The capacity of HWs in the preventive area, and at the commune level, is poor. Not only is there a numeric shortage, HWs do not have many opportunities to undertake further training to strengthen their capabilities (Ha Noi School of Public Health, 2009c). In disadvantaged areas, HWs have limited opportunities to participate in continuing medical education because they are unable to mobilise adequate funds from the provincial budget. In-service training opportunities for HWs in the preventive medicine area depend entirely on programmes and projects (Vietnamese Ministry of Health and Health Partnership Group, 2010).

In the maternal health area, research has shown that the knowledge and skills of maternity care providers were limited (United Nations Population Fund, 2007a; Vietnamese Ministry of Health and Health Partnership Group, 2009). Many HWs at the commune level had not received any re-training after graduation from a medical university or secondary medical school. Some provinces were the subject of interventions to improve the capacity of health personnel through different training programs but the materials were neither standardised nor applicable to practice (United Nations Population Fund, 2007a).

Recently, the quality assurance of training for the health workforce has been raised as an issue of priority in HRH. The key issues surrounding quality assurance of training for the health workforce were indicated in the Ministry of Health's 2010 report (Vietnamese Ministry of Health and Health Partnership Group, 2010). They are summarised below:

- Accreditation of training quality has not yet been implemented in most medical training facilities.
- Qualifications of instructors, training methods, and conditions for training are inadequate.
- The competency standards for graduates of medical schools are not uniform.
- Mechanisms for the quality assurance of continuous medical education (CME) and regulations to ensure compliance with CME have not yet been developed.

In summary, apart from the numeric shortages of staff, low levels of qualifications in HWs particularly in remote areas, have been considered a problem in Vietnam. Several contributors to this issue have included the uneven distribution of HWs among regions (as explained in the previous section), inappropriate provision of in-service training to staff to strengthen their skills; and unaccredited medical training programs and unstandardised medical school graduate competencies.

2.3.2.3 Management and utilisation of the health workforce

It has been acknowledged that health service managers are generally not skilled in the practices of HRM. The planning and HRM skills within the health system at all levels are limited. Monitoring and management of the health workforce has not been standardised. Performance appraisal has not yet been implemented as an effective human resource management tool to form the basis for performance review. In addition, there is a lack of information systems about health human resources (Vietnamese Ministry of Health and Health Partnership Group, 2010). This is a major issue for planning, health policy development and implementation strategies.

2.4 THE GOVERNANCE OF THE HEALTH SYSTEM AND GOVERNANCE OF THE HEALTH WORKFORCE

2.4.1 Definitions and key concepts of governance

The term 'governance' is often used interchangeably with the term 'stewardship', although some authors argue that governance is a better term, due to its recognisability by many international organisations and wider use in the literature (Siddiqui et al., 2009). The term 'governance' has been the subject of multiple definitions and interpretations. Governance in general requires a strategic vision and coordination between key players, and the institutional organisation. It also requires resources provision, operating procedures, and standards and rules, including the mechanisms to enforce them.

2.4.2 The governance of human resources for health

As mentioned previously, while the governance of human resources for health is acknowledged to be a very important and pressing issue internationally, it seems to be a neglected topic. Evidence confirms that effective workforce strategies enhance the performance of the health system, even under difficult circumstances (Chen et al., 2004).

It is widely accepted that the preparation, recruitment, and retention of a health workforce sufficient to achieve a country's health objectives is a key set of challenges for its health system (Countdown Working Group on Health Policy and Health Systems, 2008). One of the major challenges is securing the availability of and effectively using qualified human resources. Short and McDonald (2012) emphasised that strengthening the Indonesian health sector requires addressing major challenges related to medical personnel in two areas: distribution and quality. Thus,

it is important for health care researchers to provide those who develop and implement health care policy with up-to-date information regarding the status of current resource allocation, shortcomings and planning strategies (Olsen et al., 2005). While training is certainly an important component of HRM, without strategic HR planning, HR policy development and HRM, good performance in the health system will not be achieved (Martinez & Marineau, 1998).

Obviously, low health workforce density is one constraint to meeting population health needs. However, in low resource settings, poor-quality services, finance barriers, and other factors might be more important than scarcity of the health workforce in contributing to low service utilisation (Kanchanachitra et al., 2011). Hence, efforts to promote health workforce development in these contexts need to be integrated with complementary measures to increase financing and reduce other barriers to service use (Kanchanachitra et al., 2011).

The literature review has shown that "the separation between health policy makers and human resources practitioners is both unnecessary and dangerous, and that more integration between broader health sector and personnel policies is essential" (Martinez & Marineau, 1998, p. 345). As a result, governments play a critical role in health workforce development, because they set policies, secure financing, support education, and operate the public sector, while regulating the private sector (Chen et al., 2004). Therefore, the three most important components of HR are suggested to be health-related policies, institutional actors and human resources development functions (Martinez & Marineau, 1998). The efficient delivery of an appropriate quantity and quality of health care requires, among other things, matching the supply with the demand for the health workforce. In conclusion, the governance of HRH involves different levels from policy making to implementation levels. It can be divided into four key domains:

- Develop policies and regulations and ensure the enforcement of these policies through monitoring and regulating the implementation by health institutions.
- Secure adequate resources such as financing, infrastructure and medical equipment for the health workforce.
- Provide appropriate training and education, including ensuring the training and competency standards of health workforce cadres.

- Develop mechanisms for participation in decision-making and coordination of stakeholders.

At the implementation level, governance of HRH also involves effective leadership, HRM functions and a variety of organisational factors such as supervision, clear responsibility, career development, and training that have an important impact on competencies, motivation and performance of the health workforce.

2.5 INTRODUCTION OF POLICIES RELATED TO HUMAN RESOURCE MANAGEMENT

This section presents an overview of policies that have influenced human resource management in recent years. These include two groups that are related to employment and management practice at public facilities, including health facilities.

2.5.1 Policies regulating employment practice

These policies were issued with the purpose of providing facility managers with guidelines for staff recruitment and deployment activities. With the issuance of the Law on Government Employees and Civil Servants, facility managers have been given more flexibility in HRM practice.

- ***The Joint Circular 08/2007/TTLB-BYT-BNV of the MOH and the Ministry of Internal Affairs in 2007 (abb. as Circular 08) (Vietnamese Ministry of Health, 2007)***

This circular gives instruction on staff norms in public health facilities. Staff norms for each level within a health facility are defined in this circular based on the population, technical level, grade/rank of the facility, its role in epidemic prevention and control, local socio-economic and ecological characteristics, as well as financial resources. Circular 08 stipulates that the number of staff in CHC's should range between 5 and 10 depending on the geography, economic condition and scale of the local population. In general, the staff norms in Circular 08 for each technical level are clearly defined, based on the above-mentioned criteria. It is said that the promulgation of Circular 08 has contributed to quantitative stabilisation and qualitative improvement of human resources at health facilities.

However, there have been some reported difficulties associated with the implementation of Circular 08. Though it has been considered a staffing norm, it showed some rigidity, especially when health facilities started implementing self-control of finance and human resources according to Decree 43 that was promulgated in 2006. Whilst implementing Circular 08, health facilities experienced difficulty recruiting staff particularly in the provinces where there were large scale epidemics, a large number of infected people and a high need for treatment.

- ***Law on Government Employees and Civil Servants 58/2010/QH12 of the National Assembly (Vietnamese National Assembly, 2010)***

Prior to 2010, national and local governments (at provincial and district levels) employed health staff principally on long-term contracts. The newly issued law on Government Employees and Civil Servants had a strong impact on recruitment and remuneration of HWs in the public sector. According to this law, only people recruited and nominated to hold leadership and management positions could be considered civil servants. Most people directly performing professional activities for public service providers would no longer be considered civil servants.

The Law on Government Employees and Civil Servants issued in 2010 proposed a radical change in the administration of public service facilities (Vietnamese Ministry of Health and Health Partnership Group, 2009). Hence, it had a wide impact on the health system in terms of more effective management of contract-based personnel in health facilities.

2.5.2 Policies regulating financial management practice

These policies regulating basic salaries and supplemental allowances have provided facility managers with guidelines for paying and rewarding their staff. The policies enable facility managers to generate revenue and grant facilities with autonomy in financial and personnel management. These policies also empower managers in HRM practice, and contribute to improving financial incentives for HWs with the purpose to attract and retain HWs in their positions.

- ***Decree No. 43/2006/ND-CP issued in 2006 (Vietnamese Government, 2006)***

Decree No. 43/2006/ND-CP granted autonomy to facilities. This decree is seen as a reform strategy because it has reduced the burden on the central budget for all

health subsidisation and has encouraged facilities to develop new forms of revenue, in the interest of upgrading the quality and range of services as well as meeting staff costs. This policy has allowed hospitals greater autonomy in financial issues in the hiring of staff, in arranging unified management of revenue and expenditures, and facilitating increases in facility revenues to cover operating costs.

Under the autonomy rules, facilities can set aside part of their profits for staff bonuses. There are guidelines for Decree 43 but amounts vary. The decree states that the profit-share cannot be more than three times the total payroll. The bonuses are meant to reward productivity, but typically are shared out using a standard formula, which includes criteria relating to experience, qualifications, and position, but does not reflect actual performance. Typically, the higher the level of the facility, the higher the profit-share (Bales, 2008).

So far, Decree 43 has granted autonomy to hospitals in finance and human resource management (in fact, not total but partial autonomy) which enables hospitals to generate revenue and increase income for HWs working there. The decree has also provided managers with increased managerial autonomy and freedom to use their profits to pay for investments, salary and bonuses for their staff. One of the disadvantages has been that when a hospital operates well, it attracts experienced and competent HWs from neighbouring hospitals and facilities and therefore creates staff shortages in these hospitals. Similarly, urban areas are considered more desirable because of the potential for profit-share, so many doctors from remote areas may choose to work in urban areas, reducing staff numbers in rural areas (Health Strategy and Policy Institute, 2010).

2.6 SUMMARY

This chapter has reviewed the research relating to human resources for health in a global context and in Vietnam in particular. It is noticeable that shortages of HWs, in terms of quantity and qualifications, and uneven distribution of the health workforce are the key challenges both internationally and in Vietnam. At the global and national levels, it is evidently important to look at how the health workforce is governed and explore the implications for health outcomes. The following chapter sets out the conceptual framework within which the study was designed. The literature that discusses and presents existing theories and research on determinants

of HW competencies, motivation and performance will be introduced in the next chapter.

Chapter 3: Conceptual Framework

3.1 INTRODUCTION

This research examines the external factors that impact upon the motivation, competencies, and performance of the maternal health (MH) workforce in rural and remote areas of Vietnam. This chapter outlines the conceptual framework adopted in the research. It starts by introducing two models developed by researchers to examine the determinants of HW competencies and motivation. After this, Section 3.1 examines the strengths and weaknesses of each model. The following Sections (3.2 and 3.3.) present a new model that connects external factors with workforce motivation, competencies and performance. This model forms the basis for analysis in subsequent chapters.

The central argument in this thesis is that governance practices and other external factors positively and negatively influence motivation, competencies, and performance of the health workforce. Motivation, competencies, and performance of the health workforce are significantly connected to providing desired health-related outcomes. Two models were selected and examined for several reasons. Model 1 clearly defines the external factors that affect motivation and competencies of HWs. This model also indicates the links between HW motivation, competencies, and performance which affect health-related outcomes. Model 2 scrutinises the impact that organisational processes and wider health system factors have on HW competencies, motivation and performance. Details of each model are presented in the next sections.

3.1.2. Model 1

Description of Model 1

A model of determinants of HW performance according to standards was published by Kak, Burkhalter, and Cooper (2001) and Marquez (2001). This model outlines the connection between HW motivation and competencies, and behaviour and performance. It indicates that results such as health outcomes and client satisfaction are strongly affected by performance that is determined by relevant

standards. In addition, this model identifies the external factors that influence the performance of healthcare providers through motivation and competencies.

In this model, ***'Provider Behaviour'*** refers to performance according to a professional or other standard. In this situation, this would include complete assessment, correct diagnosis and appropriate referral, counselling, and treatment.

'Provider Motivation' (or HW motivation) incorporates expectations, self-efficacy, individual goals and readiness for change (Kak et al., 2001, p. 7). These components are presented below:

> *"Self-efficacy* is the belief that one can do a task as required. It influences whether behaviour will be initiated and sustained. This is determined by the confidence and/or training of a healthcare provider.
>
> *Readiness to change* refers to ability of a HW to overcome the persistence of previous practice and to process his/her behaviour change which normally consists of a continuum of steps that include pre-contemplation, contemplation, preparation, action and maintenance".

'Provider competencies' (or HW competencies) in this model are defined in the context of knowledge, skills, abilities and traits (Kak et al., 2001, p. 7).

> *"Knowledge* of the healthcare provider can be further enhanced through training, including on-the-job training and long-term education. Factors at levels from individual, organisational and broader social cultural factors can influence the correct use of this acquired knowledge.
>
> *Skills* refer to actions that an individual performs in a competent way in order to achieve a goal.
>
> *Abilities* are the power or capacity to do something or act physically, mentally, legally or morally. Abilities are gained over time and are more stable than knowledge and skills.
>
> *Traits* refer to distinguishing characteristics or qualities of a personal nature. Traits include attitudes, self-control and self-confidence".

Figure 3.1 graphically presents the content and interaction of Model 1.

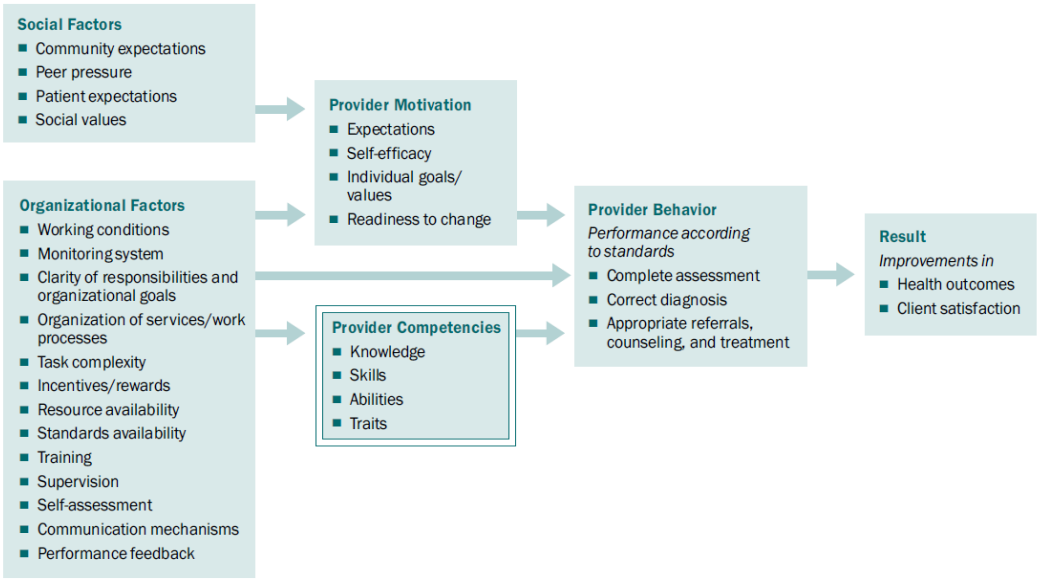


Figure 3.1 Determinants of healthcare provider performance according to standards
Source: (Kak et al., 2001; Marquez, 2001)

Model 1 also indicates the factors influencing the motivation and competencies of HWs. The factors are divided into two groups, social factors and organisational factors. *Social factors* include community expectations, peer pressure, patient expectations and social values. *Organisational factors* include working conditions, the availability of resources, performance feedback, training, supervision, clarity of responsibility and organisational goals.

Strengths of Model 1

The first strength of Model 1 is that it was developed from a review of the literature, particularly the theoretical and other related models such as the behaviour change model, diffusion of innovation, health education, and social influence theory. Secondly, it also provides practical definitions of provider performance according to standards and provider competencies. Moreover, the constituents of these terms are also clearly introduced and explained. Thirdly, it identifies a broad range of performance determinants according to standards, which are linked to quality of services, and hence are very important in the healthcare area. Also, it offers important insights into the competencies and motivation components, and highlights

them as very important individual level factors. In this model, the definition of performance and competencies as well as their constituents are also described and explained very clearly. Fourthly, it explains the relationships between health worker motivation and competencies and health worker performance. Lastly, it offers important insightful understanding into how organisational factors and social factors influence the performance and behaviour of the health workforce.

Weaknesses of Model 1

Although Kak's model emphasises the importance of organisational factors, offers an explanation of how these factors influence HW motivation and competencies, it does not show the relationship between worker motivation and competencies. In reality, a worker may not feel motivated if she or he does not have the appropriate competencies to accomplish his or her tasks.

3.1.2. Model 2

Figure 3.2 outlines Model 2 (Franco, Bennett, & Kanfer, 2002) which was developed to explain how health sector reform influences HW motivation.

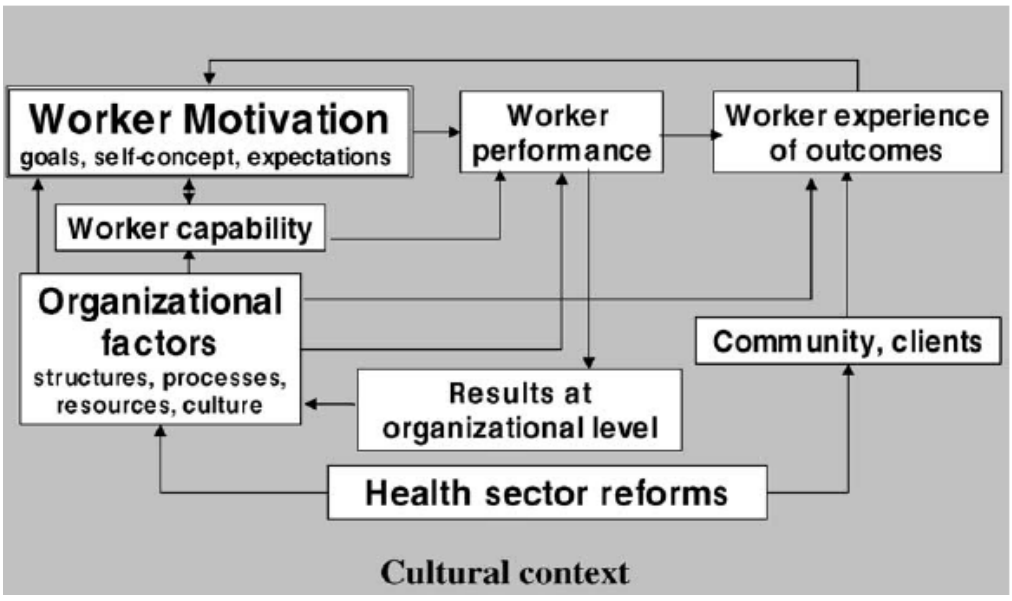


Figure 3.2. Influence of organisational factors and system on worker motivation
Source: (Franco et al., 2002)

Description of Model 2

This model has many similarities to Model 1. However, the main difference is that this model explains how health sector reform influences organisational factors and how it influences worker motivation through organisational factors.

First, this model focuses on organisational factors and their influence upon worker motivation. Organisations influence their workers through various channels including the provision of resources and processes, efforts to improve worker competence, feedback on performance and through changes to the working environment.

Organisational structures, processes and resources

According to this model, organisational structures, processes and available resources shape worker perceptions about the possibility of task accomplishment. Therefore, the ability to perform depends not only on the provider but on other system-wide support as well. This kinds of support includes providing adequate resources, sufficient authority and autonomy to complete the task and also ensuring clear responsibilities (Franco et al., 2002).

Human resource management

The core functions of human resource management (HRM) include the supply of staff, performance management, personnel administration, employer-employee relationships, education and training (Martinez & Marineau, 1998). HRM can facilitate the *"will do"* and *"can do"* components of worker motivation (Franco et al., 2002).

The *"will do"* aspect refers to the HWs' feelings of being motivated and empowered to act (Fritzen, 2007). Training opportunities enable HWs to cope with more demanding jobs and achieve their professional goals (Mathauer & Imhoff, 2006). Together with other factors such as incentive schemes, training opportunities can link performance to reward (Franco et al., 2002).

The *"can do"* aspect refers to the skills and training which enables HWs to act. Therefore, recruitment procedures play an important role in ensuring a fit between

the tasks required of individuals and the skills and knowledge that they need to perform these tasks. In addition, supervision and performance assessment processes provide appropriate feedback to workers, which may impact on performance (Franco et al., 2002).

Model 2 also explains how health sector reform influences organisational factors. Health reform can affect organisational structures, processes and resources through several routes and hence influence worker motivation through changing reporting systems and autonomy, increasing resource availability, providing channels for feedback, or creating monitoring systems. The influence of health reform on the HRM system includes the improvement of education and training, the application of new staff and allowance norms, and the creation of a closer connection between performance and reward (Franco et al., 2002).

Strengths of Model 2

This model provides a broad picture of the determinants of HW motivation and it has been argued that it can be applied to both low and middle income settings (Razee, Whittaker, Jayasuriya, Yap, & Brentnal, 2012). These determinants are called individual level factors, organisational factors, and cultural and community influences. Moreover, the Model 2 approach was cited and adopted by quantitative and qualitative studies which examine HW motivation (Chandler, Chonya, Mtei, Reyburn, & Whitty, 2009; Dieleman, Toonen, Toure, & Martineau, 2006; Mbindyo et al., 2009). For example, it was adopted as a conceptual framework in a study to explore clinical motivation in Tanzania (Chandler et al., 2009).

Weaknesses of Model 2

Although this model suggests a link between worker motivation and capability, the definition of worker capability is not clearly explained. While it takes into account other factors that impact on worker performance, such as worker capability, this is not well described.

In summary, given the strengths and weaknesses of Model 1 and Model 2, the development of a new model is necessary to take full advantage of the two models,

and complement the weaknesses of each model. A description of the new model is explained in the sections below.

3.2 DEVELOPMENT OF THE NEW MODEL (CONCEPTUAL FRAMEWORK)

Drawing on all of this literature, this research proposed a combined or unified new conceptual framework. The core components of HW performance, motivation and competence, and organisational factors were taken from Model 1 (Kak et al., 2001). The external layers (factors), including broader level factors (contextual factors, and health system factors) and their influence on HW performance were taken from Model 2 (Franco et al., 2002).

The research conceptual framework is shown in Figure 3.3.

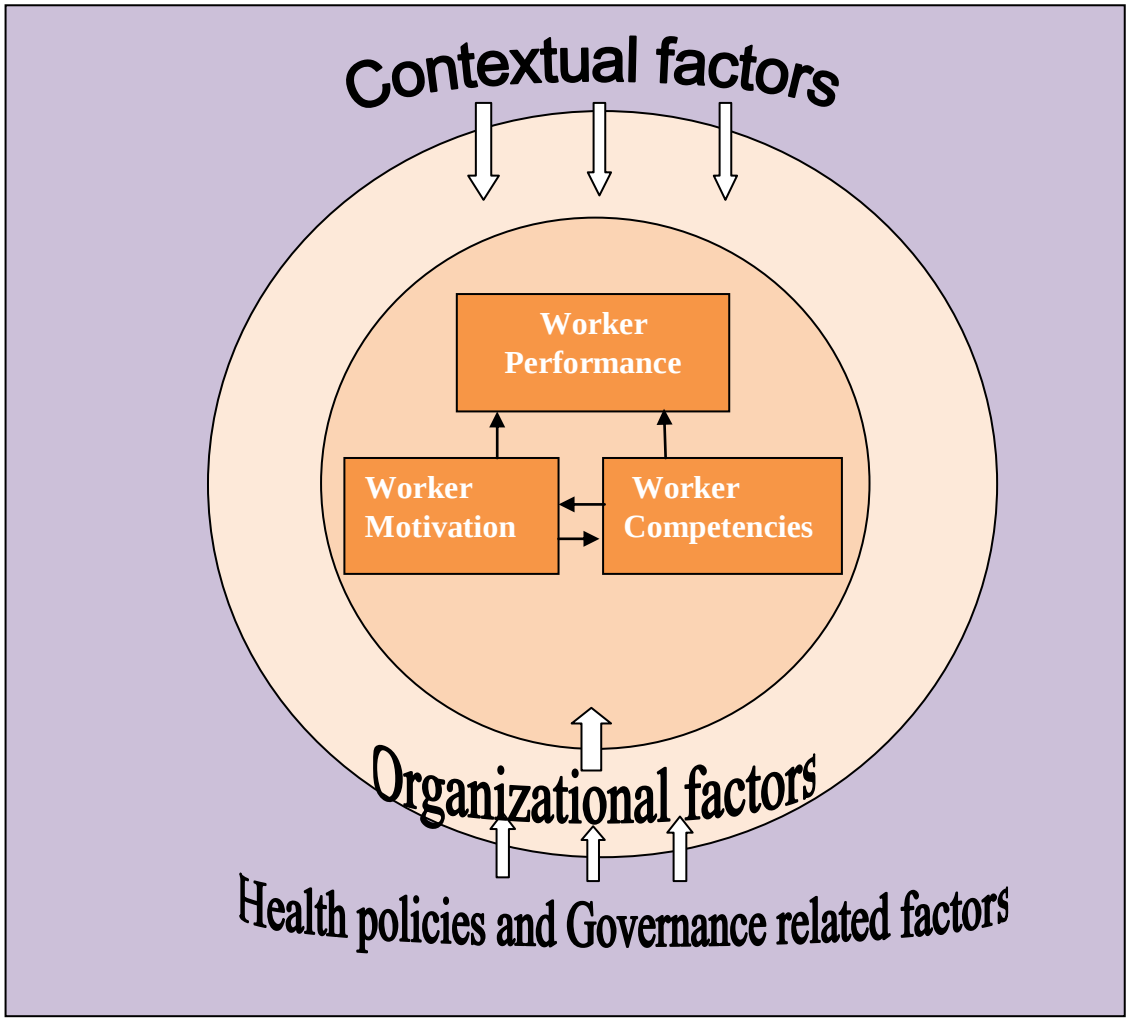


Figure 3.3 The research conceptual framework

3.3 EXPLANATION OF THE CONCEPTUAL FRAMEWORK

This section aims to provide an explanation of factors affecting HW competencies, motivation and performance by examining three levels of motivation: individual, organisational and contextual and defining the terms used in the conceptual framework. The inner circle of Figure 3.8 represents the individual level factors, which include HW motivation, competencies and performance. This framework visually represents the overarching argument of the thesis, which is that the individual level is influenced by external factors, including organisational factors (illustrated by the exterior circle) and contextual factors. The organisational factors in turn are influenced by governance-related factors (health-related policies and governance framework) at a broader context level.

3.3.1 Individual level factors

3.3.1.1. Health worker performance

According to Campbell et al. (1993) cited by Kak et al. (2001, p. 3): "Performance is something that people actually do and can be observed. By definition, it includes only those actions or behaviours that are relevant to the organisation's goal and that can be measured in terms of each person's proficiency (that is, level of contribution). Performance is what the organisation hires one to do, and do well".

Theoretically, there are two different views of performance-results and behaviours. However, in everyday practice, the term "performance" tends to be used in a way that reflects both outputs and behaviours (Williams, 2002). From a behavioural viewpoint, while performance is explicitly reflected by behaviour, not all behaviour is performance (Williams, 2002).

The World Health Organisation's framework for HW performance (World Health Organisation, 2006) defined performance as a combination of a HW being available, competent, productive and responsive. HW performance is a complex issue as HW behaviour and performance are factors influenced by a variety of determinants (Dieleman & Harnmeijer, 2006). Determinants of HW performance have been categorised in a number of ways by previous research and reviews. Performance determinants were classified in groups which include HW characteristics (individual level), health system and facility characteristics (macro

and micro levels), characteristics of the wider political and socioeconomic environment (contextual factors), and population characteristics (contextual factors) (Dieleman & Harnmeijer, 2006; Lindelow & Serneels, 2006; Marquez, 2001; Rowe et al., 2005; World Health Organisation, 2006).

According to the World Health Organisation (2006), these elements are interconnected. For example, while motivation is considered by many to be crucial to HW performance, it is determined both by factors internal to HWs and by factors in the broader context, such as their social environment.

In this research, the term "performance" is taken to mean "performance according to standards". Standards in the healthcare area are defined as "what is needed to produce quality services" by both providers and clients. Performance in accordance with standards is the cornerstone of quality assurance in healthcare and the end result of a wide range of quality assurance activities, including performance improvement (Marquez, 2001). Standards-based performance is often difficult to achieve and sustain as this involves many factors, such as behavioural, social, and organisational factors (Marquez, 2001). Competency is not the only factor affecting HW performance and does not always lead to effective performance. A variety of factors including individual motivation, and adequate support from managers and colleagues can affect HW performance (Kak et al., 2001).

To clarify the concept "performance of health worker", this study adopted the definition "performance according to standards" (Marquez, 2001), which includes complete assessment, correct diagnosis, and appropriate referrals, counselling and treatment. When examining the performance of MH workers, this study focused on the specific area of essential obstetric care services (EOCs), the standards for which were regulated by the National Guidelines for Reproductive Health (Vietnamese Ministry of Health, 2009) and technical assignment regulations (Vietnamese Ministry of Health, 2005; Vietnamese Ministry of Health of Vietnam, 2001).

In this study, the definition of HW performance refers to the performance of EOCs according to the National Guidelines for Reproductive Health (Vietnamese Ministry of Health, 2009). Specifically, EOC performance refers to the provision of five EOCs at the commune level and eight EOCs at the district level. Through a combination of quantitative and qualitative research, the influence of various factors on HW performance was explored.

3.3.1.2. Health worker competencies

In much of the literature, both the terms "competences" and "competencies" are used and associated with job behaviour (Williams, 2002). However, the term "competencies" is more usually interpreted at an individual (person-related) level. Thus in this study, we use the term "competencies" to reflect HW competencies. The literature has shown a number of ways to define the competencies of HWs.

First, competencies were defined by Williams (2002) as "any individual characteristic that can be measured or counted reliably and can be shown the remarkable difference between the effective and ineffective performers" (Williams, 2002, p. 104). According to Spencer & Spencer, 1993 cited by Williams (2002, p. 103), "a competency is an *underlying characteristic* of an individual that is *causally related* to *criterion-referenced* effective and/or superior performance in a job or situation".

> *"Underlying characteristic* means the competency is a fairly deep and enduring part of a person's personality and can predict behaviour in a wide variety of situations and job tasks.
>
> *Causally related* means that a competency causes or predicts behaviour and performance.
>
> *Criterion-referenced* means that the competency actually predicts who does something well or poorly, as measured on a specific criterion or standard". (Williams, 2002, p. 103).

Second, competencies are also defined in the context of particular knowledge, traits, skills, and abilities (Kak et al., 2001). *Knowledge,* according to this definition involves understanding facts and procedures. *Traits* are personality characteristics that predict a person's behaviour or response in a certain way. *Skill*s are the capacity to perform specific actions and a function of both knowledge and the particular strategies used to apply knowledge. *Abilities* are the attributes that a person has inherited or acquired through previous experience and brings to a new task (Kak et al., 2001, p. 7). According to Fleishman and Bartlett, 1969 cited by Kak et al. (2001), abilities are more fundamental and stable than knowledge and skills. Previous study results confirmed that qualifications alone do not guarantee competencies (Dogba & Fournier, 2009). Among the reasons suggested for the gap in theoretical knowledge

and skills are inadequate training methods, insufficient practice of learned procedures (Rowe et al., 2005) due to lack of equipment, inability to delegate tasks, and large variations in clinical protocols (Dogba & Fournier, 2009).

As mentioned earlier, there have been a number of ways to define competencies. For example, Kak et al. (2001) defined competencies of HWs as a combination of knowledge, skills, abilities and traits, while other studies reported that competencies were determined by HW characteristics such as professional qualifications and years of working experience (Traoré et al., 2014). Among the few studies that have examined MH worker competencies, most of them measured competencies by evaluating HW knowledge (Harvey et al., 2004; Traoré et al., 2014). Although HW qualifications partially determine their capacity to handle patients adequately, they do not always guarantee HW competencies (Dogba & Fournier, 2009). Therefore, in this study different components of competencies of HWs were considered, including qualifications, expertise, in-service training opportunities in EOCs and self-rated ability to perform EOCs.

In this study, the self-reported ability of MH workers to perform EOCs was examined. The availability of training opportunities to improve knowledge and skills was also explored. Moreover, the survey results provided information regarding the qualifications and expertise of HWs. The analysis of the results of these components of competencies helped to describe and partially reflect the competencies of HWs.

3.3.1.3. Health worker motivation

In the work context, motivation can be defined as "an individual's degree of willingness to exert and maintain an effort towards attaining organisational goals" (Franco et al., 2002, p. 1255). Motivation is a psychological process, and a transactional process that result from the interactions between individuals and their work environment. It is a complex concept and is determined by factors at various levels (Dieleman, Pham, Le, & Martineau, 2003; Franco et al., 2002).

At an individual level, factors such as a person's job expectations, self-efficacy, individual goals/values are considered to play a critical role in motivating one to perform their job (Kak et al., 2001). Literature has shown three broad classes of internal influences on worker motivation, including 1) goals, motives, and values 2) self-concept and other self-variables; and 3) cognitive expectations about the

relationship between various actions and consequences (Franco et al., 2002). In addition, these factors may also be grouped as lower-level needs, motives and goals, and the higher-level motives and goals. The lower-level needs relate to satisfaction of basic survival needs such as salary, safety and job security, whereas the higher-level needs relate to recognition, achievement and self-determination (Franco et al., 2002). These internal factors mediate the organisational impact and affect the way that HWs mobilise their resources to accomplish their tasks, and therefore affect worker behaviour and performance (Franco et al., 2002).

Worker motivation is also influenced by working conditions or hygiene factors (Adair, 2006; Hersey, Blanchard, & Johnson, 2001), including facility infrastructure and availability of resources; organisational support which captures supervision, training opportunities and professional promotion; and organisational structures and processes. Apart from these, contextual factors including characteristics of the population being served (e.g. client expectations) also influence worker motivation.

There is broad agreement that motivation is an important influence on the performance of HWs (Franco et al., 2002; Rowe et al., 2005; World Health Organisation, 2006) and low motivation has a negative impact on the performance of individual HWs (Mathauer & Imhoff, 2006). Previous studies showed that when motivation is low "worker's performance will suffer as much as if their ability were low" (Hersey et al., 2001, p. 13). In other words, worker performance is considered as one motivational outcome. (Kanfer, 1999) identifies two aspects of the internal motivation process. The *"will do"* aspect involves the establishment of conformity between personal goals and the goals of the organisation (goal setting). The *"can do"* aspect involves the extent of individual resources that are mobilised to achieve the joint goals. This is dependent on workers' perception of their competencies and the resources available in the working environment (Franco et al., 2004).

Seven major themes regarding motivational factors were identified in recent reviews (Dieleman, Gerretsen, & van de Wilt, 2009; Willis-Shattuck et al., 2008). These include 1) financial (in terms of salary or allowances), 2) career development, 3) continuing education, 4) health facility infrastructure, 5) resource availability (refers to equipment and medical supplies), 6) relationships in the work place, and 7) personal recognition or appreciation. These determinants of worker motivation can affect one or both of the aspects "*will do*" and "*can do*", and lead to the major

outcome of the motivational process: worker behaviour or performance (Franco et al., 2004).

In this study, a 23-item scale was used to measure the motivation of HWs. Constructed from 23 items, this scale covers many aspects of internal motivation, from individual needs, motives and goals to self-concept and self-conscientiousness. The content of this scale is described in detail in Chapter 4, Methodology. The results of motivation outcomes are presented in Chapter 6.

3.3.1.4. The relationships among health worker performance, motivation and competencies

The literature on the health workforce focuses on the linkages between the conditions in which HWs work and their performance. One useful way of thinking about how to boost workforce capacity to perform at a high level is to think of what the workforce "*can do*" (what their skills and training enables people to do) and what the workforce "*will do*" (what they feel motivated and empowered to do) (World Bank, 2006).

- ***Performance and competencies***

According to the WHO framework on HW performance, four dimensions of HW performance include availability, competence, responsiveness, and productivity. HW competence here encompasses the combination of technical knowledge, skills and behaviours (World Health Organisation, 2006). In research conducted in Armenia, the performance of HWs in antenatal and postpartum care was strongly associated with having the practical knowledge and skills to use everyday tools (Fort & Voltero, 2004). Specifically, knowledge and skills, capacity to do the job, and training opportunities which were relevant to HW competencies, proved to be influential on HW performance (Fort & Voltero, 2004; Marquez, 2001).

- ***Performance and motivation***

Health sector performance is critically dependent on worker motivation, with service quality, efficiency, and equity, all directly mediated by workers' willingness to apply themselves to their tasks (Chandler et al., 2009; Franco et al., 2002; Franco et al., 2004).

The linkage between the performance and motivation of HWs has gained increasing attention in recent years. It is generally understood that performance is influenced by many factors ranging from available infrastructure to an individual's personal values. Many of these factors influence performance through HW motivation and competencies. "Good performance requires, among other things, a willingness to perform well (motivation) and the capability (or requisite skills) to do the job" (Martinez & Marineau, 1998, p. 350).

According to the two-factor theory of Herzberg (Adair, 2006), the motivation to remain in a position is related to the needs of job security and salary. An organisation or institute can attract, motivate and retain their workforce through a variety of factors including income and incentive packages, the availability of resources, and a working environment wherein communication and relationships between colleagues and supervisors play a crucial role (Dieleman et al., 2003; Franco et al., 2002). In Herzberg's theory these are called *"Hygiene factors"* or *"factors for dissatisfaction (dissatisfiers)"* and are mainly extrinsic factors.

On the other hand, the motivation to improve individual performance is linked to a feeling of self-fulfillment, achievement and recognition (Dieleman et al., 2003). These feelings can be influenced by effective performance management, through which supervisors ensure that staff are competent and motivated in their job. It involves supervision, training, performance appraisal and career development. These *"satisfiers"* (or 'motivators') are based on intrinsic motivation (Adair, 2006).

- ***Motivation and Competencies***

Although a considerable number of studies have been conducted to determine HW motivation factors, very few of them have explicitly mentioned the influence of HW competencies on motivation. As described earlier in the definition of the conceptual framework, HW competencies are constituted of knowledge, skills, abilities and traits. It is broadly understood that HW competencies are influenced not only by HW qualifications, but also by training opportunities to perform the assigned tasks well, which help to reach the level of being certified competent. It is agreed that training conducted using different methods (e.g. in-service training or continuing education) is one motivational factor (Dieleman et al., 2009; Willis-Shattuck et al., 2008). Previous study has shown the effect of training courses on making HWs feel

more comfortable and confident with their work afterwards (Mathauer & Imhoff, 2006). Therefore, it can be assumed that a HW would feel more motivated if he or she received adequate training to accomplish his/her tasks, that is when he/she is competent. HWs need to have adequate competencies in order to be motivated people, or in other words, competencies are also a motivational factor at the individual level.

3.3.2 External factors

It is broadly understood that good performance requires a willingness to perform well and command of the appropriate competencies (Franco et al., 2002; Martinez & Marineau, 1998). However, HW performance is dependent on and limited by many external factors on a broader level such as resource availability, working conditions or leadership and management (Franco et al., 2002; Kak et al., 2001).

3.3.2.1. Contextual factors

It is acknowledged that the understanding of contextual factors is very important in explaining the success or failure of performance management intervention (Rowe et al., 2005). Following reviews conducted by Dieleman et al. (2009) and Franco et al. (2002), contextual factors were divided into two groups, including community or population characteristics and wider political and social environment characteristics. Meanwhile, other studies mentioned an additional dimension of contextual factors, namely, social factors which include community expectations, peer pressure, patient expectations and social values (Kak et al., 2001). A majority of studies focused on social factors such as provider and client or peer relationships (Kak et al., 2001), employer or the client/community recognition (Fort & Voltero, 2004), respect from the community (Dieleman et al., 2003; Witter et al., 2011), and social interaction (Razee et al., 2012). Although the characteristics of the population being served were frequently mentioned, little has been reported on the influence of these factors on HW competencies, motivation and performance.

In this study, the contextual factors are explored through qualitative research. This helps to unpack the aspects of contextual factors that either directly or indirectly affect motivation and performance, as perceived by HWs at the study locations.

3.3.2.2. Organisational factors

In many of the studies tackling human resource issues, factors related to organisation were mentioned as very important ones, affecting HW performance and motivation. These factors can be grouped as part of the health facility environment which include peer pressure, leadership, supervision and resource availability (Jaskiewicz & Tulenko, 2012; Rowe et al., 2005). In a WHO report (World Health Organisation, 2006), these factors were grouped as system and support-related interventions that create an enabling working environment for HWs. Other authors refer to these factors as "organisational factors", and although the components can be varied, all refer to the work environment. Among other grouped factors, including HW characteristics (individual level) and characteristics of the wider political and social context, organisational factors (facility and system level) were identified as one determinant of HW performance (Dieleman & Harnmeijer, 2006).

This study, focused on the organisational factors that may contribute to improving HW competencies and enabling HWs to perform MH services at the work place. These organisational factors were explored through qualitative interviewing and quantitative questionnaire. Such factors can have a direct impact on health performance or indirectly affect performance through health motivation and competencies. The conventional factors, such as provision of adequate infrastructure, medical equipment and training opportunities, were analysed as well as the facility-related factors perceived by HWs in the study locations.

3.3.2.3. Governance-related factors (Governance framework and Health policies)

It is broadly understood that "the leverage points for workforce development are governments, because they set policies, secure financing, support education, and operate the public sector while regulating the private sector" (Chen et al., 2004, p. 1987). In the context of health sector reform, strategic human resource (HR) planning, HR policy development and HRM are prerequisites of good performance (Martinez & Marineau, 1998). This requires a good policy system at both local and national levels (Gerein et al., 2006).

It is universally accepted that health policies have a strong impact on human resources for health, both negatively and positively. For example, the national policy that changed the method of staff recruitment, from centralisation to being controlled

by the labour market, was reported to lead to a higher rate of migration of health staff (Liu, Martineau, Chen, Zhan, & Tang, 2006). Another example is the autonomous policy on finance and manpower which was confirmed as widening the staff income disparity between urban and rural areas and between curative and preventive medicine, which ultimately led to staff mobility (Health Strategy and Policy Institute, 2010; Witter et al., 2011). In contrast, literature indicates that the decentralisation of HRM functions brought about improvements in working environments, changes in bureaucratic procedures and appropriate preparation in structures and staffing (Dieleman et al., 2009).

To provide a better understanding of the influence of the broader health system on HW competencies, motivation and performance, governance-related factors (governance framework and health policies) at the district level were analysed using qualitative research. This study focuses on how governance framework feeds into organisational factors, which in turn, influence individual HWs.

3.4 SUMMARY

This chapter sets out the conceptual framework that not only helps the researcher to investigate data in a specific manner but also influences data analysis in subsequent chapters of this thesis. The conceptual framework s also evolved from the analysis process and the ongoing theoretical argument.

The next chapter will explain how a mixed methods approach was applied to generate an understanding of factors influencing HW motivation and performance. It will present the details of the study design, including the data collection procedures, the strategies for quantitative and qualitative analysis and how results were integrated in the interpretation phase.

Chapter 4: Research Methodology

4.1 INTRODUCTION

This chapter sets out the rationale underpinning the design of this study and explains why a mixed methods design is appropriate for answering the research questions set out in Chapter 1. It also provides details of the methods. This chapter consists of five sections. Sections 4.2 and 4.3 introduce the mixed methods approach and rationale for applying this approach to the study. This is followed by the study design, presented in Section 4.4. Section 4.5 describes the study population in two provinces Bac Giang and Lao Cai, and provides a justification for choosing these provinces. Sections 4.6 and 4.7 provide details of quantitative and qualitative methods in terms of data collection, instrument development, data management and analysis.

4.2 RATIONALE OF STUDY DESIGN

The focus of the inquiry is to better understand the factors that influence the motivation, competencies, and performance of the maternal health (MH) workforce at the district and commune levels. In doing so, the aim is also to examine the impacts of the local governance framework on service configuration and organisational factors, which in turn influence HW competencies and motivation. Additionally, the study also aims to explore the influence of contextual factors on the health workforce. The service area of maternal health was chosen because there are clear outcomes that the government hopes to achieve, and these services are widely recognised as reflecting a core component of good health care.

To do this, it was anticipated that there would be a need to examine the relevant policy documentation and its interpretation, to gather information about how and why policy was implemented in different ways in different contexts. Additionally, the study intended to measure the impact of policy on service capability, as reflected in the competency levels and capacity at the points of service delivery. From the nature of the research questions set out in Chapter 1, it was evident that no one method would provide the different types of information

required. Moreover, because of the complexity of the interactions, the study would need to be limited in terms of location and service, so context could be captured.

4.3 INTRODUCTION OF THE MIXED METHODS APPROACH

4.3.1 Definition of mixed methods

Mixed methods research is defined as a research approach or methodology that "focuses on research questions that call for real-life contextual understandings, multi-level perspectives, and cultural influences. It employs rigorous quantitative research assessing magnitude and frequency of constructs and rigorous qualitative research exploring the meaning and understanding of constructs" (Creswell, Klassen, Clark, & Smith, 2011, p. 4).

4.3.2 Rationale for applying mixed methods

It is commonly acknowledged that quantitative research is concerned with questions about how much, how many, how often and to what extent. Quantitative research is mainly deductive in that it tests theories that have already been proposed or "known" phenomena and central patterns of association, including inferences of causality. Quantitative data has the potential to provide measurable evidence, to help establish cause and effect, to create the possibility of replication and generalisation to a population, and to facilitate the comparison of groups. Quantitative approaches used in health sciences are descriptive surveys, observation studies, case-control studies or cohort studies, and randomised controlled trials.

Qualitative research, on the other hand, is concerned with finding the answers to questions that begin with why, how and in what way. Qualitative research is mainly inductive and allows for identification of previously unknown processes, explanations of why and how phenomena occur, and of the range of their effects. Qualitative research can also provide a level of understanding about a problem that can then be triangulated with standardised quantitative measures (Plano Clark & Creswell, 2008). The strength of qualitative research is its focus on the contexts and the meanings of human lives and experiences, for the purpose of inductive or theory-development-driven research (Creswell et al., 2011). Data in qualitative research helps researchers understand processes, provides detailed information about the setting or context and emphasises the voice of participants. Qualitative approaches

used in health research vary, ranging from case studies and grounded theory to ethnography and phenomenology (Miles & Huberman, 2002).

The benefits of the counterbalanced strengths and weaknesses of both approaches have fuelled the historical argument for mixed methods research (Plano Clark & Creswell, 2008). First, mixed methods research provides strengths that offset the weaknesses of both quantitative and qualitative research (Creswell, 2003). Second, mixed method studies provide opportunities for the integration of a variety of theoretical perspectives. Additionally, the combination of quantitative and qualitative data, helps investigators to gather evidence based on the nature of the question and theoretical orientation. "Mixed methods research is more than simply collecting qualitative data from interviews, or collecting multiple forms of quantitative evidence but it involves the intentional collection of both quantitative and qualitative data and the combination of the strengths of each to answer research questions" (Creswell et al., 2011, p. 5).

This methodological framework is considered the most appropriate for this project due to the nature of the research issue. Human resources are arguably the most important 'inputs' to any health system, and have critical impacts on overall performance of the system. However, strategic planning related to the workforce at different levels of the health system, often focuses on the overall organisational structure and composition of the workforce, rather than on more challenging issues related to performance of HWs (Fritzen, 2007). The governance of human resources for health (HRH) therefore has been increasingly recognised as an important factor that influences the performance of the health workforce. Having applied a mixed method approach, this study aimed to examine the influence of the governance framework on the motivation, competencies and performance of MH workers at the study locations.

Studies examining HRH and governance in developing country settings have predominantly used qualitative methods, as shown by work done in Indonesia (McDonald, Yoganingrum, Purwaningrum, Ariani, & Short, 2009), Vietnam (Dieleman et al., 2003; Oxford Policy Management & Hanoi School of Public Health., 2010), and Ethiopia (Lindelow & Serneels, 2006). A mixed-methods approach was used in Mali (Dieleman et al., 2006), Jordan and Georgia (Franco et al., 2004), and case study methodology was used in research conducted in China (Liu

et al., 2006). Moreover, although the measurement of the motivation and competencies of HWs is usually undertaken with quantitative instruments such as self-administrated questionnaires, qualitative research has also been used to clarify the results of quantitative findings. This approach, for example, was used in Kenya, to develop a measure of HW motivation (Mbindyo et al., 2009).

4.3.3 Mixed methods design

With respect to mixed methods design, four types are commonly used in health service research. These include concurrent (or parallel or convergent) design, sequential design, embedded (or nested) design, and multiphase design (Creswell et al., 2011).

Concurrent design is used when the researcher intends to merge concurrent quantitative and qualitative data to address study aims (Creswell et al., 2011). It also allows the investigator to collect both quantitative and qualitative data and combine the two to best understand the participants. Based on the nature of the research questions and study objectives, this study adopted a concurrent design whereby data from quantitative and qualitative methods contributed to answering research questions.

4.3.4 Sampling issue

There are four broad sampling methods used in social and behavioural sciences, namely probability, purposive, convenience and mixed methods sampling (Plano Clark & Creswell, 2008). Mixed methods sampling is divided into five different types, including, basic sampling, sequential, concurrent, multilevel and a combination of mixed-methods sampling. Among these methods, multilevel mixed methods sampling strategies are described as "very common in research examining organisations in which different units of analysis are nested within one another" (Plano Clark & Creswell, 2008, p. 219). The choice of sampling technique is generally determined by the specific purposes that are associated with answering a specific research question. Therefore in this study, the multilevel mixed methods sampling technique was applied. Sampling techniques will be discussed later in Section 4.3.

4.3.5 Integration of data

Mixed methods research is not just a simple matter of putting two kinds of methods together. It is important for the researcher to consider study design, data merging and final interpretation of resulting data. When a mixed methods approach is used, the researcher intentionally integrates or combines qualitative and quantitative data, rather than keeping them separate. Literature has indicated three approaches, including merging data, connecting data and embedding data (Plano Clark & Creswell, 2008).

This study applied the merging data approach to integrate the data from quantitative and qualitative methods. The merging approach consists of combining the qualitative data, in the form of text, with the quantitative data, in the form of numeric information. Integration was achieved by reporting results across the thesis. Firstly, the quantitative results, which detail to what extent phenomena, occur were examined. This was followed by an analysis of qualitative data that helped to gain a deeper understanding into the reasons why phenomena occur and the implications for policy and practice.

4.4 STUDY DESIGN

This study took place in five districts in Bac Giang and Lao Cai provinces in the northern mountainous area of Vietnam (The characteristics of the two provinces are discussed in detail in Chapter 5). The position of each province is illustrated in Figure 4.1.

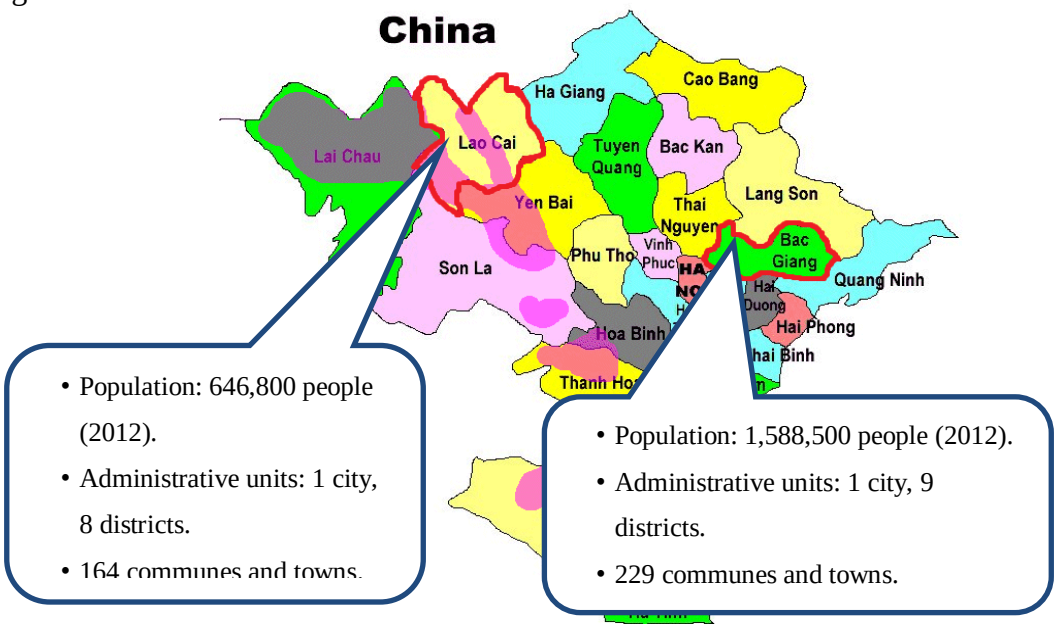


Figure 4.1 Map of the northern region of Vietnam

The study consisted of 3 phases which are set out below.

4.4.1 Phase 1: Literature review

A literature review of health governance and HRH was undertaken in order to identify the factors influencing provider performance as well as the key domains of governance on human resources for health. This helped to identify the gaps in the literature in order to conceptualise the research questions. The findings of the literature review were used to select or develop research instruments and develop an appropriate framework approach for data analysis.

4.4.2 Phase 2

Stage 1: After research ethics approval was obtained from the Queensland University of Technology (Research ethics approval number 1200000087), Stage 1 commenced. Stage 1 had two components.

Key informant interviews

Interviews with key informants from the Vietnamese Ministry of Health and provincial level were conducted to identify the perceived organisational factors affecting health worker performance in the context of Vietnam, particularly in rural and remote areas. Key informants from the Ministry of Health included representatives from the Personnel Department and the Maternal and Child Health Department. A purpose of the key informant interviews was to shape the interview schedule for HWs. In addition, it was important to understand how these informants perceived the influence of health related policies on health workforce and the processes of implementation of those policies, and how they thought governance practices at different levels could be strengthened. The data from these interviews was included in the main study.

Pre-test survey instrument and interview guide

The survey instrument and interview guide were pre-tested on a small sample group (20 MH workers for the survey instrument two MH workers and one manager for the interview guide) to confirm that revisions were appropriate before they were used in the pilot sample.

Stage 2: Pilot testing

The quantitative and qualitative research instruments were piloted primarily in a district in Bac Giang province. This pilot study also aimed to explore the relevance of the conceptual framework in the Vietnamese context, and determine how to adapt culturally specific terminologies, concepts and definitions in the research tools.

Quantitative research:

A survey of the MH workforce was undertaken in the piloted district with a total sample size of 65 participants. The data collected included socio-demographic information of providers, training opportunities in the last 12 months, self-reported ability to perform essential obstetric care functions, and the self-administered motivation scale result. The collected data was entered into EpiData 3.1 software (Bennett, Myatt, Jolley, & Radalowicz, 2001).

The purpose of the pilot study was to validate the quantitative instruments, including a self-administered questionnaire suitable for the MH workforce. Results from this survey helped to refine the quantitative instruments in terms of content and survey design. Survey design changed as a result of the pilot (discussed in 4.6.2, Development of Instruments in Quantitative Research).

Qualitative research:

Interviews with six health workers and managers were conducted to pilot the interview schedule. The findings of these interviews were used to further develop the conceptual framework and to guide the development of tools in the main study.

4.4.3 Phase three: Main study

This phase involved applying the quantitative and qualitative instruments validated in Phase two across the study sites. The design for this phase is described in Figure 4.2.

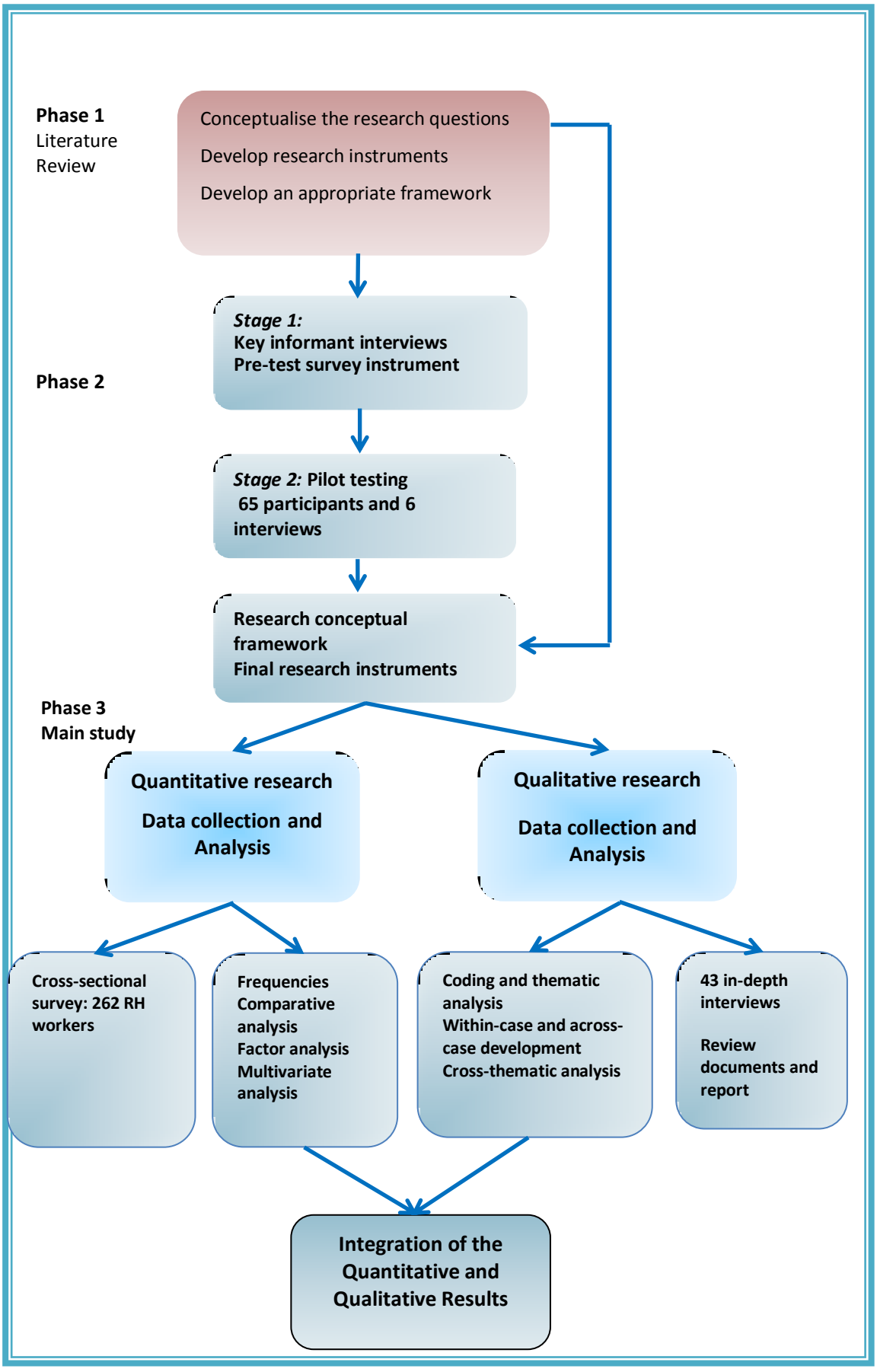


Figure 4.2 Visual model for mixed-methods research

4.5 STUDY POPULATION

This study applied stratified purposive sampling (also known as quota sampling). In this technique, the researcher first divides the participant group into strata and then selects a small number of participants to study intensively within each strata (Plano Clark & Creswell, 2008). First, two provinces were chosen based on the indicators of MH services reported to the Ministry of Health in the previous year. Lao Cai had a relatively low performance on the indicators for this output, while Bac Giang had much higher indicators. Table 4.1 presents the indicators of MH services for the two provinces in the year the PhD was commenced.

Table 4.1 Indicators of MH services in Bac Giang and Lao Cai in 2011

Indicators	**Lao Cai (%)**	**Bac Giang (%)**
Proportion of pregnant women having pregnancy management	80.4	98.5
Proportion of women having at least three antenatal care episodes during pregnancy	52.5	96.8
Proportion of birthing women attended by skilled health workers	81.1	98.8
Proportion of deliveries at a public health facility	66.5	98.6

Source: (Vietnamese Ministry of Health, 2011b): Reports of provincial Reproductive Health Centre to the Department of Mother and Child Health on provision of MH services of provinces, 2011.

Second, two districts in Bac Giang province and two districts in Lao Cai province were chosen randomly from the list of districts in each province. Later, an additional district in Bac Giang was included in the research following a suggestion from provincial administrators that the district hospital in that district had not performed a caesarean section (one of the key essential obstetric care services assigned for district levels) in recent years.

Finally, within each district, all MH workers who agreed to participate in the research were recruited to the quantitative study while a sub-sample of participants for the qualitative research was selected purposively.

4.6 QUANTITATIVE RESEARCH

The quantitative cross-sectional survey particularly addresses Research Question 1. In the study, in addition to demographic information, participants were asked about training opportunities and to self-rate their ability to perform the EOCs.

4.6.1 Study sample

For the quantitative survey, all MH workers in the selected districts were eligible for participation in the study. The sample frame is illustrated in Table 4.2.

Table 4.2 Description of research sample

District level	70 district HWs working at the Obstetric Department of District Hospitals and Department of District Health Centres.
Commune level	192 commune health workers (CHWs) responsible for maternal health services at CHCs.
Total	262

4.6.2 Development of the research instruments

Structure of research instruments

The survey questionnaire consisted of four sections, namely the relevant demographic information about MH workers, training opportunities, self-rated competencies and motivation levels of MH workers.

Section One: Socio-demographic information about MH workers.

The demographics section of the survey included questions on:

- Age, gender, educational attainment, and qualifications,
- Professional occupation of HWs,
- Previous work experience, and,
- Type of job, location of work and shift work requirements.

Section Two: The training courses attended by MH workers

This section provided a list of different kinds of training courses with details for HWs to complete. HWs were asked to include the name and content of training courses completed in the 12 months prior to being interviewed. They were also asked to indicate any relevance of the courses to their daily jobs.

Section III: Competencies of MH workers in essential obstetric care services

This applies only to MH workers at district and commune levels. The five essential obstetric care services (EOCs) were assessed at the commune level and eight EOCs were assessed at the district level.

EOCs are provided at different levels according to the Vietnamese Ministry of Health Decision 385/QD-BYT and the National Guidelines for Reproductive Health (Vietnamese Ministry of Health, 2009; Vietnamese Ministry of Health of Vietnam, 2001). According to the National Guidelines for Reproductive Health (Vietnamese Ministry of Health, 2009), *basic essential obstetric care services* consists of six types of service at the provincial and district levels but only five types of service at the commune level. These five are 1) injection of antibiotics, 2) injection of uterotonic drugs (e.g. Oxytocics), 3) injection of anticonvulsants for pre-eclampsia and eclampsia (e.g. Magnesium Sulphate), 4) placenta removal/uterine checking and 5) normal delivery assistance (no uterine curettage for retained placenta). The *comprehensive essential obstetric care services* provided at the district level consist of eight types of service for the provincial and district hospitals and seven types of service for the Provincial Reproductive Health centre (excluding caesarean section). These include 1) injection of antibiotics, 2) injection of oxytocics, 3) injection of anticonvulsants for pre-eclampsia and eclampsia (e.g. Magnesium Sulphate), 4) placenta removal/uterine checking and 5) assisted vaginal delivery, 6) uterine curettage for retained placenta, 7) caesarean-section, and 8) blood transfusion.

In this section, MH workers were asked whether they were able to perform the services assigned to their working level or not. Where the answer was 'No', they were asked to provide reasons with reference to a list.

Section IV: MH worker motivation

Reference to literature failed to find a survey scale measuring MH worker motivation that had been specifically designed for use in the Vietnamese population Following a search for potential scales used in workforces likely to be similar to Vietnam, it was decided to use an instrument adopted from research in Kenya (Mbindyo et al., 2009). This was a 23-item, seven-facet scale used to assess worker motivation. Each facet was assessed with two to four items, and a total score was computed from all items. A summated rating scale format was used, with five choices per item ranging from "strongly disagree" to "strongly agree". The seven facets were general motivation, burnout, job satisfaction, intrinsic job satisfaction, organisational commitment, conscientiousness, and timeliness and attendance.

4.6.3 Modification of quantitative instruments

The sectors of the survey were based on the literature review and were adjusted based on the results of the pilot study. The final version of the survey was sent to experts for review, and further revised based on their comments.

Significant changes to the questionnaires after the pre-test included:

Modifications to Section II questions concerning training opportunities were made to:

- Make it clearer that respondents who had not undertaken any formal training in the past 12 months did not have to complete questions on formal training.
- Change an open-ended question on types of training to a limited response question given that the types of activities identified in the pilot were very limited.

Modifications to Section III:

Section III concerned knowledge about MH services, training opportunities provided to MH workers and their ability to perform EOCs. These questions were too long for practical purposes, taking at least 30 minutes, and did not allow respondents time to complete the subsequent sections. Based on suggestions from MH experts and experience from previous studies focusing on the MH workforce, the number of questions was reduced to cover only the items concerning the EOCs relevant to the specific target group (United Nations Population Fund, 2006a).

Modifications to section IV concerning the Motivation of HWs

The questionnaire used a 23-item, seven-facet scale where each facet was assessed using two to four items, and a total computed from all items. A summated rating scale format was used, with five choices per item ranging from "strongly disagree" to "strongly agree".

The original scale was a 5-level Likert scale, ranging from strongly disagree to strongly agree with a “Don’t know” response for each question. However, it was suggested that the “Don’t know” response should be omitted because of limited use (Mbindyo et al., 2009). Some adjustments were also made to the wording to allow for cultural differences. For example, the statement “I am often absent from work” was changed to “I am not worried about being absent from work”. The statement “I cannot be relied on by my colleagues at work” was changed to “People do not rely on me at work”.

Content validity

In recognition that the scale had not been validated in the Vietnamese population and that some changes in wording were necessary, a number of steps were taken to try and ensure pre-data collection evaluation of the relevance and cultural equivalence of survey questions (Maneersriwongul & Dixon, 2004 cited by Squires et al., 2013). The scale questions were translated into Vietnamese by the researcher and translated back by another translator independently into English to ensure semantic equivalence. The second translator was Vietnamese and qualified and fluent in both Vietnamese and English. The questionnaire was then reviewed by five MH workers working at the commune and district levels who were interviewed afterwards to identify ambiguities in the questions and also to check the time limit for completing the questionnaire.

The revised questionnaire was pre-tested for the second time on 20 MH workers before being used in the pilot study in order to ensure items were relevant to respondents and phrased in a culturally acceptable manner. The aims of the pre-test included a) obtaining respondents and data collectors’ feedback on the survey’s readability and user friendliness, b) ensuring the Vietnamese translation was equivalent and meaningful and c) simplifying or modifying the phrasing of the

questions to ensure easy comprehension and also to ascertain whether the questions were culturally acceptable.

4.6.4 Data collection

The provincial health department provided contact details for all health facilities within the province that provided MH services. All MH workers in health facilities within the selected districts were sent an invitation to participate in the research. Those participants who agreed to participate to the study were invited to the meeting room in a district health centre or district hospital. In the meeting room, participants were presented with an overview of the study including the purpose and procedure and were also given instructions on how to fill in the questionnaire in order to avoid missing information.

In situations where MH workers could not gather in a district centre, self-administered questionnaires were delivered to MH workers by a research assistant. These questionnaires were returned to the researcher after completion. Participants were not identified on the questionnaire to ensure anonymity.

In this study, the primary researcher designed the study and conducted all interviews. The research assistants helped deliver and collect questionnaires because of the large number of participants who worked in different commune health centres.

4.6.5 Sample size

The sample size was largely defined by the size of the workforce in the study districts. There were 262 completed questionnaires, which represented a response rate of 95%. In considering the adequacy of this sample size for subsequent analysis, various heuristic rules were considered. This included that the absolute minimum sample size would exceed 100 participants and the ratio of participants to variables should be at least 10:1 (Kline, 1986 and Nunnally, 1978 cited by Gaskin & Happell, 2014). Based on this, the sample size was considered adequate for conducting multiple regression (Field, 2009) and factor analysis.

4.6.6 Data management and analysis

After any necessary recoding, data was double entered using EpiData. Identified inconsistencies were checked against the original survey. The data was then transferred to IBM SPSS 19 (Statistical Package for the Social Sciences) for analysis (Howitt, Cramer, & Howitt, 2011).

Frequency distributions of variables were generated and checked for missing data and invalid responses. No cases had more than 10% of the data missing (Tabachnick & Fidell, 2001). There were no missing values in response to the motivation scale.

A comprehensive statistical analysis protocol was developed along with the quantitative survey and was discussed with the supervisors and a biostatistician. Descriptive statistics were used to assess all variables. To identify the differences between provinces in HR availability, qualification, access to training opportunities and ability to perform EOCs, comparative bivariate analyses was used, including Chi-squared tests for categorical independent variables.

Subsequently ***logistic regression*** and ***multiple regression analysis*** were conducted to predict the outcome variables from several independent variables (Field, 2009). The dependent variables included 'Ability to perform EOCs' and 'Total motivation scores'. Since the value of the regression coefficients depends upon the variables in the model, the predictors were selected from reviews of published research and based on their substantive theoretical importance.

A correlation matrix of all of the predictors was scanned to identify potential multicollinearity. Those independent variables that correlated highly with other variables were reviewed and, where logical, excluded from the model or consideration given to inclusion of an interaction variable (Field, 2009). Details of the regression analysis is presented in Chapter 6.

Factor analysis was conducted to validate the motivation scale. The loading of factors and extraction of factors were then considered in relation to the original published factors. Based on the identified factors, reliability analysis was used to test the inter-consistency of each items of the motivation scale. Further details of this factor analysis and the validation of the motivation scale will be described in Chapter 6.

4.7 QUALITATIVE RESEARCH

Study two of this phase involved qualitative research specifically addressing Research Questions 2 and 3.

4.7.1 Study population

Sampling: Purposeful sampling was used to select key informants (Patton, 2002, p. 230). At the central and provincial levels, key informants were selected based on their responsibilities and functions. For example, in order to obtain information about the health policies relating to human resources for health, the most suitable informant was a representative from the Human Resource Department of the Ministry of Health. At the district and commune levels, apart from purposeful sampling, the approach also involved the "snow ball or chain" approach. Here, the number of interviews were determined by the point that responses to particular questions were saturated, that is, no new information was being added (Strauss & Corbin, 1998 cited by Plano Clark & Creswell, 2008, p. 212). Experience from the pilot study helped to identify the most suitable participants for interviews. The study sample is presented in Table 4.3.

Table 4.3 Sample frame for qualitative study

Respondents	Number	Bac Giang	Lao Cai
Administrators at the Central level	**2**		
Human Resource Department	1		
Maternal and Child health Department	1		
Administrators at the Provincial level	**6**		
Representative of the HR Department, Provincial Health Department	2	1	1
Representative of the Provincial Reproductive Health centre	4	2	2
District level	**26**		
District Hospital Manager	11	6	5
Manager at District Health Centre	9	5	4
MH worker (obstetric doctor and midwife)	6	3	3
Commune level	**9**		
Head of Commune Health Centre	4	2	2
Commune health worker	5	3	2

Total number of respondents at district and commune levels		**22**	**19**
Total number of respondents:	**43**		

4.7.2 Data collection

Semi-structured, open-ended interview guides were used in the interviews. Managers and HWs from selected health facilities and within the provincial health department were identified and participants were invited by written invitation to participate. Participation was voluntary and informed consent was sought before undertaking interviews. Interviews were conducted in a meeting room within a health facility to assure the privacy of the interview.

In-depth interviews were conducted with participants from commune to central levels. In order to ensure maximum variation, participants were selected in terms of HW categories, different health facilities and gender (Liamputtong, 2009). Sources and methods were triangulated by interviewing HWs and their managers at the commune, district, provincial and central levels in order to assure the trustworthiness of data (Dieleman et al., 2006).

All interviews were recorded and notes taken during the interviews. Memos and daily field notes taken become a part of developing theory and helped to conceptualise the ideas from grounded data (Creswell, 2013). Discussion among researchers about emerging ideas or concepts supported the process of developing theory during the field work process.

4.7.3 Data analysis strategy

The interviews from the qualitative research were transcribed, coded and analysed using the grounded theory technique with quotations servings as units of analysis (Patton, 2002, pp. 487-502). All interviews were conducted in Vietnamese, recorded, and then checked for quality. The coding process was implemented in three main steps.

At first, the preliminary coding schedule was developed. The initial categories were primarily influenced by the conceptual framework set out in Chapter 3. Secondly, the transcripts of these interviews were independently scrutinised and coded manually. An initial phase of coding on three transcriptions from representative respondents at commune, district and provincial levels were conducted

by the primary researcher and research team members, using the preliminary coding schedule and also applying grounded theory techniques (Charmaz, 2006). This process helped identify open codes that were not part of the conceptual framework. The results of the parallel coding process were then compared, validated and agreed upon in order to form the initial code book. This process of developing the initial code book also involved revisiting field notes (Creswell, 2013; Miles & Huberman, 1994), and the existing literature review, particularly in relation to the categories set out in the contextual framework set out in Chapter 3. Thirdly, the final code book was developed, including a definition for each code. Subsequently a consensus coding structure reflecting core themes was developed through research team discussions. The code book was then translated to English to guide discussions with supervisors.

All transcripts were uploaded into NVivo 9.0 (Bazeley, 2007) and single coded by the principal researcher. The grounded theory approach provided a way of synthesising data, developing concepts and also testing emergent concepts with additional fieldwork (Patton, 2002). Throughout this process, coding was reviewed for consistency, revised and refined in an effort to link the core themes to the research questions (Razee et al., 2012). The open codes were grouped in meaningful patterns or dimensions thereafter creating categories. Categories were subsequently re-organised and linked together in order to understand the relationships between categories, highlight patterns and clarify interpretation. The whole process of "making sense of data" was linked to the literature review (Creswell, 2013). The initial findings were written up by the principal researcher, and then shared with the supervisors and research members. The validation and interpretation of data was undertaken against the quotes from transcripts. Memos and field notes were used to help triangulate interview data.

4.8 SUMMARY

This chapter has demonstrated that the research approach adopted was consistent with the conceptual framework set out in Chapter 3 and best answered the research questions proposed in Chapter 1. It has explained the procedural aspects of the research, which included sampling, data collection and data analysis. This chapter also described the way that the study was organised in order to ensure reliability and trustworthiness.

The following chapter will introduce the characteristics of the study provinces in terms of population, geographical conditions and MH workforce. Moreover, it will present the survey results, which include the similarities and differences between MH workforces in the two provinces.

Chapter 5: Characteristics and capabilities of case study provinces

5.1 INTRODUCTION

This chapter contributes to answering Research Question 1 and aims to describe the specific contexts where the study was conducted. Contextual factors, including demographic and geographic conditions, may affect HW competencies, motivation and performance, as demonstrated in the conceptual framework set out in Chapter 3. These conditions are briefly introduced in section 5.2.1 and 5.3.1. Also reviewed in this chapter are the characteristics of the maternal health (MH) workforce and the utilisation of MH in two provinces. Section 5.4 presents the results of the survey into the current state of the MH workforce in the study provinces in terms of the qualifications, expertise and training opportunities provided to them. These factors are considered to have an s influence on the competencies and motivation of HWs, as discussed in Chapter 3.

5.2 LAO CAI PROVINCE

5.2.1 Demography and Geography

Lao Cai is a province in the northern mountainous area of Vietnam, located around 320 km northwest of Hanoi. Lao Cai is divided into one city municipality, Lao Cai, and eight rural districts with eight towns under the districts. The districts are divided into 164 communes, of which 138 communes are located in disadvantaged areas or near the border. The field work in Lao Cai was conducted in two mountainous districts.

According to the General Statistics Office of the Government of Vietnam, the population of Lao Cai province, as of 2012, was 646,800 with a density of 101.0 persons per square kilometre over a total land area of 6,383.9 square kilometres. Rural dwellers account for 25% of the population of the province (Vietnamese General Statistics Office, 2012).

The province has 25 of Vietnam's ethnic minority groups accounting for 64.1% of its population. The distribution of ethnic minorities comprises Kinh (35.9%), H'Mong (22.2%), Tay (15.8%), Dao (14.1%), Giay (4.7%), Nung (4.4%) and others

(Phu La, San Chay, Ha Nhi, La Chi groups) (Lao Cai Provincial People's Committee, 2014).

5.2.2 Maternal health workforce

Increasing evidence has shown that the availability of qualified HWs is an important determinant of use of the MH services by women (Olsen et al., 2005). In other words, the shortages in the health workforce also can also result in poor quality services and low usage of services. This section provides an overview of the MH workforce in Lao Cai in terms of the total number of MH workers, their qualifications and expertise.

Table 5.1 shows that in the MH network of Lao Cai there were only 11 medical doctors with postgraduate degrees in obstetrics or with 10 month training (obstetric specialisation), and a further 47 medical doctors. The percentage of all HWs regardless of qualifications (including medical doctors, midwives and assistant doctors) that had obstetric specialisation was also quite low (28.2%). About 8% of HWs had university and equivalent degrees (98/1185) and it was noticeable that approximately 10% of HWs had only elementary degrees (105/1185).

Table 5.1 Maternal health workforce of Lao Cai province in 2011

Category of HWs	**Total number**
Medical Doctors	**69**
Medical doctors have postgraduate qualifications in Obstetrics and or 10 month training of Obstetric specialisation	11
Master/Specialist degree of Paediatrics (having additional 2 years of Paediatric training)	11
General medical doctors	47
Midwives	**307**
University degree or equivalent	22
Secondary degree	285
Assistant doctor	**347**
Assistant doctor (general)	332
Assistant doctor (Obstetric)	15
Nurses	**342**
University degree or equivalent	6
Secondary degree	249

Category of HWs	Total number
Elementary	87
Laboratory Technician	5
Other	**115**
Secondary degree pharmacist	97
Elementary degree pharmacist	17
Bachelor of Public Health	1
Total	**1185**

Source: Report of Provincial Reproductive Health Centre of Lao Cai, 2011

5.2.3 Maternity services utilisation

With regard to the conceptual framework introduced in Chapter 3, the utilisation of MH services may be one of the contextual factors that influence HW motivation and competencies. Therefore, this section includes description of the utilisation of MH services in particular so as to provide a better insight into the context of the study locations, and also reflect the link to the current state of the MH workforce.

Table 5.2 shows overall maternal service utilisation in Lao Cai in 2011. There were 14,655 births of which 66.5% took place at a health facility. Overall, maternal care was fairly good, with 52.3% of women receiving at least three antenatal care episodes, 64.2% receiving postnatal care and 42.5% receiving at least one care episode in the first postnatal week. Maternal mortality rate was less than 34 per 100,000 live births.

Table 5.2 Maternity services utilisation in Lao Cai province in 2011

MH utilisation	Number	Percentage
Total number of women having childbirth	14,655	
Number of woman having more than 3 antenatal care (ANC) episodes	7,691	52.3%
Number of women birthing at a health facility	9,746	66.5%
Skilled birth attendance	11,887	81.1%
Caesarean section	1,870	12.7%
Postnatal care	9,405	64.2%
Postnatal care in the first week	6,222	42.5%
Maternal death	5	

Source: Report on provision of MH services in Lao Cai in 2011

Table 5.3 shows that the proportion of women giving birth at a public health facility (CHCs and district hospital) was quite low: 31.6% and 47% in Sa Pa and Bat Xat respectively. The proportion of deliveries at CHCs in Sa Pa was very low (4.5%) and relatively low in Bat Xat (18.2%). The majority of women in these districts had home-based delivery or visited other clinics. The reason for this will be discussed later in Chapter 7.

The percentage of women who had skilled birth attendance in Sa Pa and Bat Xat was 71.2% and 60.9% respectively, though this did not take into account the large number of women giving birth at home or other places (for which the statistics were not available).

Table 5.3 Maternity services utilisation in 2 districts in Lao Cai in 2011

	Total number	**At CHC**	**At District hospital**	**At home and other clinics**
Number of women living in district giving birth				
Sa Pa district	966	44(4.5%)	252(26.1%)	670(69.4%)
Bat Xat district	1512	275(18.2%)	436(28.8%)	801(53%)
Number of women having at least 3 antenatal episodes				
Sa Pa district	601	44(7.3%)	252(41.9%)	305(50.7%)
Bat Xat district	934	594(63.6%)	340 (36.4%)	NA
Number of women assisted by skilled HWs in the district				
Sa Pa district	690	44(6.4%)	252(36.5%)	NA
Bat Xat district	921	485(52.7%)	436(47.3%)	NA
Caesarean section				
Sa Pa district	72	NA	72	NA
Bat Xat district	97	N/A	97	NA

Source: Reports of district health centres (form 1– Department of Maternal and Child Health, MOH) and district hospitals (form 5 of Bat Xat and Sa Pa districts), Lao Cai province.

As shown in Table 5.4, only two thirds of the women in Sa Pa district had antenatal checks, with just one fifth going to CHCs for this service. The proportion of women birthing at home in Sa Pa in January 2013 was very high, at 65.6%. Conversely, only five women in this district went to a CHC to give birth.

Table 5.4 Report on MH services in Sa Pa district in January 2013

		Place to give birth		
	Total number	CHC	Home	Other health facilities (clinics, district hospital)
Number of women giving birth	99	5	65	29
Number of women having at least 3 antenatal episodes	68	20	26	22
Number of birthing women assisted by skilled HWs	75	5	41	29

Source: Report of Sa Pa district health centre for maternal health services, January 2013

Figure 5.1 illustrates the low proportion of women giving birth at health facilities or having skilled birth attendance in Sa Pa, a district of Lao Cai province. In Sa Pa, where the majority of the population are ethnic people, more than half of the CHCs had very few or even no women at all coming to CHCs for delivery services.

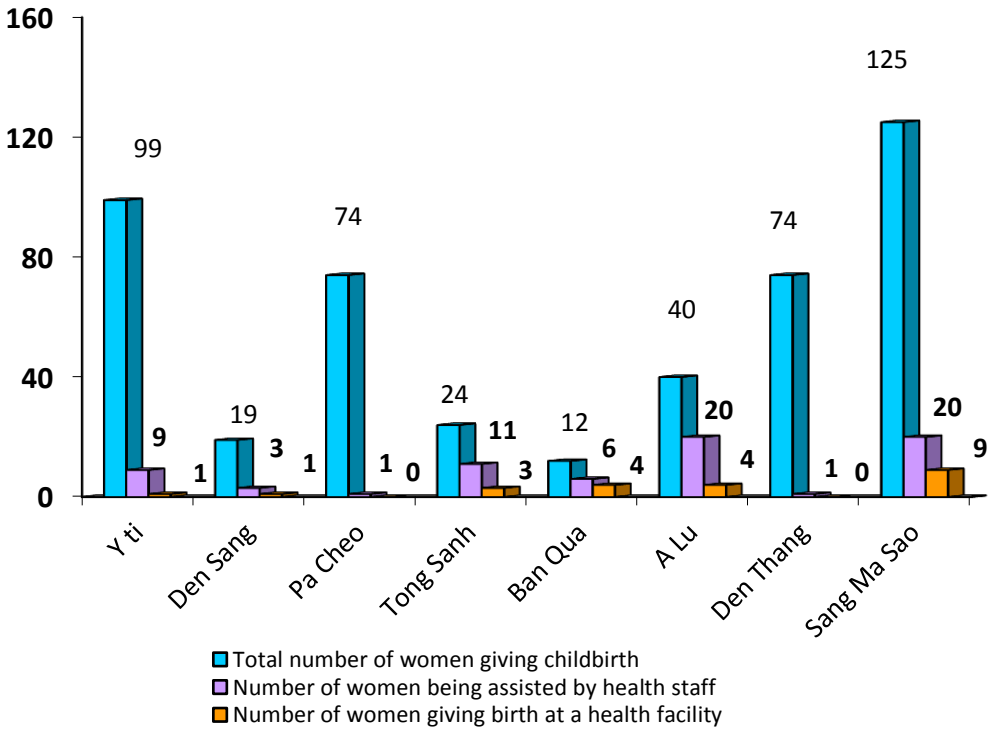


Figure 5.1 Maternity utilisation in 8 CHCs of Sa Pa showing lowest proportion of women giving birth at a facility in 2012.

Source: Report of Sa Pa district health centre for maternal health services, 2012

5.3 BAC GIANG PROVINCE

5.3.1 Demography and Geography

Bac Giang province is in the northern midlands and mountainous area of Vietnam. It is located in the northeast region of the country, situated 50 kilometres to the east of Hanoi. The province covers an area of 3848.9 square kilometres (General Statistics Office of Vietnam, 2012).

Bac Giang lies in the Red River Delta. It borders Quang Ninh to the east, Lang Son to the north, Thai Nguyen and the urban district of Soc Son in the capital Hanoi to the west, and Bac Ninh and Hai Duong to the south. It comprises three land forms, namely, the lowland or delta land, the midland and the mountainous region. The midland areas are in the districts of Hiep Hoa and Viet Yen, and the city of Bac Giang. The mountainous districts are the Son Dong, Luc Ngan, Yen The, Tan Yen, Yen Dung and Lang Giang districts. The seven mountainous districts account for 72% of the area of Bac Giang province. The terrain, lying between the high mountains to the north and the Red River Delta to the south is only moderately mountainous.

According to the 2012 census, the population was 1,588,500, with a density of 413.0 people/km², 1.7 times the national average (Vietnamese General Statistics Office, 2012). There are 26 ethnic groups in the province, of which the Kinh comprised 88.1%, followed by the Nung (4.5%), Tay (2.6%), San Chay (1.6%) San Diu (1.6%), Hoa (1.2%) and Dao people (0.5%).

The administrative units comprise one city municipality, nine rural districts, seven precincts, 16 town districts and 229 communes. This field work was conducted at one district in a midland area and two mountainous districts; each of those had between 20 and 22 communes.

5.3.2 The Maternal health workforce

Table 5.5 shows that the total number of medical doctors with obstetric specialisation in Bac Giang was 59. The percentage of HWs having a university or equivalent degree or higher was less than 25% (371/1542) and the percentage of all HWs having an obstetric specialisation, regardless of qualifications, was approximately 45% (681/1542).

Table 5.5. Maternal health workforce in Bac Giang in 2012

Category of HWs	**Total number**
Medical Doctors	**322**
Postgraduate degree qualifications in Obstetrics	50
Master/Specialist degree of Paediatrics (having additional 2 years of Paediatric training)	1
Medical doctors with Obstetric specialisation (10 month training)	9
General medical doctors	262
Midwives	**283**
University degree qualification or equivalent	23
Secondary degree qualification	260
Assistant doctor	**590**
Assistant doctor (general)	251
Assistant doctor (Obstetric)	339
Nurses	**341**
University degree qualification or equivalent	26

Category of HWs	**Total number**
Secondary degree qualification	315
Laboratory Technician	2
Other	**4**
University pharmacist	1
Secondary degree pharmacist	2
Bachelor of Public Health	1
Total	**1542**

Source: Report of Provincial Reproductive Health Centre of Bac Giang, 2012

5.3.3 Maternity service utilisation

Table 5.6 shows overall maternity service utilisation in Bac Giang province in 2011. There were 25,398 births (a lower birth rate than Lao Cai), of which 98.6% of births took place at a public health facility. Overall, the level of maternal care was much higher than in Lao Cai, with 96.8% receiving at least three antenatal care episodes, 96.4% receiving postnatal care and 83.9% % receiving at least one care episode in the first postnatal week. The maternal mortality rate was less than eight per 100,000 live births.

Table 5.6 Maternity utilisation in Bac Giang province 2011

MH utilisation	**Number**	**Percentage**
Total number of women giving birth	25,398	
Number of woman having more than three antenatal care episodes	24,592	96.8%
Number of women birthing at a health facility	25,050	98.6%
Skilled birth attendance	25,092	98.8%
Caesarean section	3,337	13.1%
Postnatal care	24,486	96.4%
Postnatal care in the first week	21,297	83.9%
Maternal death	2	

Source: Report on provision of maternal health services in Bac Giang in 2011

Table 5.7 shows the statistics for maternity services utilisation at the three selected districts. While almost all pregnant women in Viet Yen district gave birth in a local health facility, in Lang Giang (60%) and Yen Dung (52.2%) the proportion was much lower. The differences in the health facility attended were also noteworthy.

In Lang Giang and Yen Dung districts, of those women giving birth at a public health facility, 22.2% and 44.2% of women did so in the district hospital. However, in Viet Yen, 61% of women gave birth in the district hospital and only approximately 10% did so in CHCs.

The data for the number of women having more than three episodes of ANC and skilled birth attendance was less reliable because the reports did not record women going to health facilities other than CHCs and district hospitals. The district report only showed that a substantial number of women had this care provided elsewhere.

Table 5.7 Maternity services utilisation in three districts of Bac Giang in 2011

	Total number	**At CHC**	**At district hospital**	**Other place**
Total number of women living in district giving birth				
Lang Giang district	2857	1080(37.8%)	635(22.2%)	1142(40%)
Viet Yen district	3893	386(9.9%)	2376(61%)	113(29.1%)
Yen Dung district	2375	190(8%)	1050(44.2%)	1135(41.8%)
Number of women having at least 3 antenatal episodes				
Lang Giang district	1715	1080 (63%)	635 (37%)	N/A
Viet Yen district	3893	N/A	N/A	N/A
Yen Dung district	2375	1225 (51.6%)	1050 (44.2%)	N/A
Number of birthing women assisted by skilled HWs in district				
Lang Giang district	1715	1080(63%)	635(37%)	N/A

	Total number	At CHC	At district hospital	Other place
Viet Yen district	2762	386(14%)	2376(86%)	N/A
Yen Dung district	1240	190 (15.3%)	1050(84.7%)	N/A
Caesarean section				
Lang Giang district			7	
Viet Yen district			97	
Yen Dung district			365	

Source: Reports of district health centres (form 1– Department of Maternal and Child Health, MOH) and district hospitals (form 5 of Lang Giang, Viet Yen and Yen Dung districts, Bac Giang province.

In summary, MH service delivery and the MH workforce were very different between the two study provinces. Women in Bac Giang were more likely to give birth in a health facility and more likely to have higher rates of accessibility to maternity care such as antenatal assessments. The reasons for this and the implications for human resource management are discussed subsequently in Chapter 7- Contextual factors and Chapter 9 - Organisational factors.

5.4 SURVEY RESULTS

As explained in Chapter 3, the focal point of the study was the individual factors of HWs that included competencies, motivation, and performance. It has been widely agreed that competencies of an individual encompass knowledge, skills, abilities, and traits. Therefore, it was necessary to understand the characteristics of the MH workers who participated in the study in terms of qualifications, work experience, and expertise. This section reports on the results of the survey conducted with HWs in both provinces on attributes relevant to characterising the MH services. Methods for the survey were described in Chapter 4. There were 160 respondents from Bac Giang and 102 from Lao Cai (estimated response rates of 94.5% and 93.6% respectively).

5.4.1 General characteristics of participants

Table 5.8 shows the general characteristics of the survey participants. In summary, in both provinces, more than 70% of HWs working in the maternal health area were female. In Bac Giang, 99.4% of participants were Kinh, while in Lao Cai,

more than 40% of participants were non-Kinh ethnic people. Lao Cai is a mountainous province where the majority (more than 80%) of the population are non-Kinh ethnic people. The proportion of HWs aged from 30-49 in the two provinces were similar; however, there were significantly more younger respondents in Lao Cai (25.5% aged under 30 years compared with 6.3% in Bac Giang) and more older respondents in Bac Giang (16.3% compared with 3.9% in Lao Cai). Overall, 39.3% of participants held managerial positions and this proportion was very similar in each province.

In Bac Giang province, more than half of the participants (51.2%) had more than 10 years' experience working in MH with just over one fifth (21.3%) having less than five years. By contrast, the levels of experience appeared lower in Lao Cai with only 37.2% of participants having over 10 years' experience, although this difference was marginally statistically significant ($\chi^2 = 5.85$, $p<0.054$).

Most participants in both provinces were medical doctors (MDs) (22.9%), assistant doctors (34.4%) or midwives (38.6%). While the proportion of assistant doctors was similar in both provinces, (Bac Giang 33.8%, Lao Cai 35.3%), in Bac Giang the proportion of staff holding a MD degree was 32.5% compared to only 7.8% in Lao Cai. Half (50.0%) of the staff in Lao Cao were midwives compared to 31.3% in Bac Giang.

Of the 262 participants in this survey, 8.4% came from the Reproductive Health Department of the District Health Centre (DHC), 18.3% from a District Hospital (DH), and the remainder from CHCs. This represents 95% of the total employees of the respective units.

Table 5.8 General characteristics of participants

No	Participant characteristics	Province		Total (%)	χ^2	P value
		Bac Giang(%)	Lao Cai (%)			
1	**Gender (female)**	116(72.5)	77(72.5)	193(73.7)	0.29	0.59
2	**Ethnic group**	3(0.6)	43(42.2)	48(16.8)	76.9	<0.001
3	**Age group**				1.90	0.39
	20-29	10(6.3)	26(25.5)	36(13.7)		
	30-49	124(77.5)	72(70.6)	196(74.8)		
	50-59	26(16.3)	4(3.9)	30(11.5)		
4	**Position**				0.65	0.42
	Manager	66(41.3)	37(36.3)	103(39.3)		
	Staff	94(58.8)	65(63.7)	159(60.7)		
5	**Technical Position**				26.96	<0.001
	Medical doctor	52(32.5)	8(7.8)	60(22.9)		
	Assistant doctor	54(33.8)	36(35.3)	90(34.4)		
	Midwife	50(31.3)	51(50.0)	101(38.6)		
	Nurse	3(1.9)	7(6.9)	10(3.8)		
	Technician	1(0.6)	0	1(0.4)		
6	**Type of Facility**				1.90	0.39
	RH Dept. of District Health Centre	16(10.0)	6(5.9)	22(8.4)		
	O&G Dept. District Hospital	31(19.4)	17(16.7)	48(18.3)		
	Commune Health Centre	113(70.6)	79(77.5)	192(73.3)		
7	**Years of working in maternal health area**				5.85	0.054
	< 5 years	38(21.3)	33(32.4)	67(25.6)		
	5-10 years	44(27.5)	31(30.4)	75(28.6)		
	>10 years	82(51.2)	38(37.2)	120(45.8)		

5.4.2 Qualifications of health workers working in the MH area

Qualifications and pre-service education are considered to substantially contribute to individual competencies, which was one component of the individual factors set out in the conceptual framework. Participants were asked about the highest qualifications they had achieved, which were classified into three levels: secondary degree (two years of training in medical expertise, equivalent to vocational training); full university degree or equivalent; and post-graduate degree (details of the training program for MH workers is introduced in Table 2.2, Section 2.3 of Chapter 2). Table 5.9 describes the qualification levels of participants by province.

Table 5.9 Qualification levels of participants by province

	Province		**Total**	χ^2	**p value**
Qualification	**Bac Giang**	**Lao Cai**			
Secondary degree	96(60.0)	87(85.3)	183(69.9)		
University or equivalent degree	56(35.0)	13(12.8)	69(26.3)	18.93	< 0.001
Post graduate	8(5.0)	2(2.0)	10(3.8)		

While the majority of MH workers had secondary degree qualifications in both provinces, there was a significant difference between the provinces as to higher qualifications. In Bac Giang 40% of the participants had university or post-graduate degree qualifications compared to 14.8 % in Lao Cai (χ^2= 18.93, p<0.001). These results are similar to the results of the national survey which found that the majority of the MH workforce in district hospitals had attained secondary qualifications only (Vietnamese Ministry of Health, 2011a). Only about one fifth of respondents in both provinces had attained full university degrees or higher.

Table 5.10 shows the qualification levels of the HWs by level of facility in the two provinces. In both provinces, the majority of HWs working in the RH department of DHCs and CHCs had not achieved university or higher level qualifications. There was a significant difference between provinces, with fewer MH workers in Lao Cai holding higher degree qualifications compared to Bac Giang (Lao Cai 14.7%, Bac Giang 40%, χ^2 = 18.92, p<0.001). Indeed, there were no

participants from the DHC in Lao Cai who held university degree or higher qualifications, while 31.4% of the HWs working in the RH department of Bac Giang held university or higher degrees.

The proportion of HWs working in DHs with a university degree or equivalent and higher in Bac Giang was 50.6%, which was much higher than in Lao Cai with only 29.4%. However, the difference was not statistically significant.

Table 5.10 Qualifications of HWs by facility type and province

Facility	Bac Giang (%)			Lao Cai (%)		
	Secondary	**University degree and higher**	**Total**	**Secondary**	**University degree and higher**	**Total**
RH Dept. of DHC	11(68.6)	5(31.4)	16(100)	6(100)	0	6(100)
O&G Dept. of DH	15(48.4)	16(50.6)	31(100)	12(70.6)	5(29.4)	17(100)
CHC	70(61.9)	39(38.1)	109(100)	69(87.3)	10(12.7)	79(100)
Total	96(60.0)	56(40.0)	156(100)	87(85.3)	15(14.7)	102(100)
χ^2= 18.92 , p<0.001						

These survey results are consistent with the results of a 2010 national survey conducted by the Ministry of Health (Vietnamese Ministry of Health, 2011a). In this survey, the average number of HWs working in CHCs was six and the most common type of HW at the commune level was a general assistant doctor (nearly 80% in CHCs). The second most common type of HW was a secondary midwife. General medical doctors were available at 52.3% of CHCs surveyed, and assistant doctors with obstetric/paediatric specialty at 41.7%. At the DH level there was an average of 24 HWs working in the Orthopedic-Obstetric or Obstetric Departments. The majority of HWs held secondary degrees, which included secondary nurses, secondary midwives and assistant doctors. There was an average of 5 HWs per hospital with a university degree or higher qualifications. The study also showed that many DHs had combined obstetric and orthopedic services, offered in an Orthopedic-Obstetric

department. This appeared to be driven by the need to share anesthetic technicians and surgeons (Vietnamese Ministry of Health, 2011a).

5.4.3 Expertise of maternal health workers

In order to have adequate competencies, which include skills and abilities to perform assigned tasks, HWs are supposed to have appropriate expertise. Table 5.11 shows the expertise levels of HWs in the two provinces. Overall, while more than 50% of participants working in the MH area in both provinces had obstetric expertise or higher training, there were higher levels of expertise in Bac Giang compared to Lao Cai, though the difference was not statistically significant.

Table 5.11 Proportion of HWs of two provinces working in the MH area with and without obstetric expertise (or having official training courses on obstetrics)

Province	**Bac Giang (%)**		**Lao Cai (%)**		**Total (%)**	
	With	Without	With	Without	With	Without
Midwife	50	N/A	51	N/A	101	N/A
Assistant doctor	38 (71.3)	16 (29.7)	3 (8.3)	33 (91.7)	41 (45.5)	49 (54.5)
Medical doctor	7 (14.3)	49 (85.7)	2 (25)	8 (75)	9 (14.8)	52 (85.2)
Total	95(59.4)	65 (40.6)	56 (54.9)	46 (45.1)	151(57.6)	101(42.4)

N/A: not applicable to midwife category since all midwives have obstetric expertise

Among participants with obstetric expertise, about two thirds were midwives (66.9%) and approximately one quarter were assistant doctors (27.1%); medical doctors accounted for only 6%. In the Bac Giang province, most doctors were general medical doctors. Only seven of the 56 doctors (14.3%) working in the MH network had completed official training courses in obstetric care. Of these seven doctors, four had completed a two-year course and three doctors had completed a 10-month training course in obstetrics. However, more than two thirds of the assistant doctors had obstetric/paediatric expertise. Among participants in Lao Cai, eight out of 10 medical doctors were general doctors, with only two people completing a two-year training course in obstetrics. Most assistant doctors were general and only three of them had obstetric/paediatric expertise.

In Bac Giang province, about three quarters (71.3%) of assistant doctors had an obstetric speciality. By contrast, this proportion was much lower in Lao Cai with only 8.3% of assistant doctors having obstetric expertise. This difference is statistically significant, χ^2= 33.52 and p<0.001.

The results of the current study also aligned with the national survey (Vietnamese Ministry of Health, 2011a) which found that among the MH workforce of 78 DHs in the eastern north region (which includes Bac Giang and Lao Cai), only 26.2% of HWs had an obstetric expertise, marginally lower than the national average of 27.8%. Conversely, the proportion of general medical doctors in this region was high, 66.9% compared with the national average of 59.9%.

Figure 5.2 shows the qualifications of midwives working in the two provinces. Of 101 midwives in both provinces, 84 were secondary midwives (83.2%). The corresponding figures in Bac Giang and Lao Cai were 80% and 86.3% respectively.

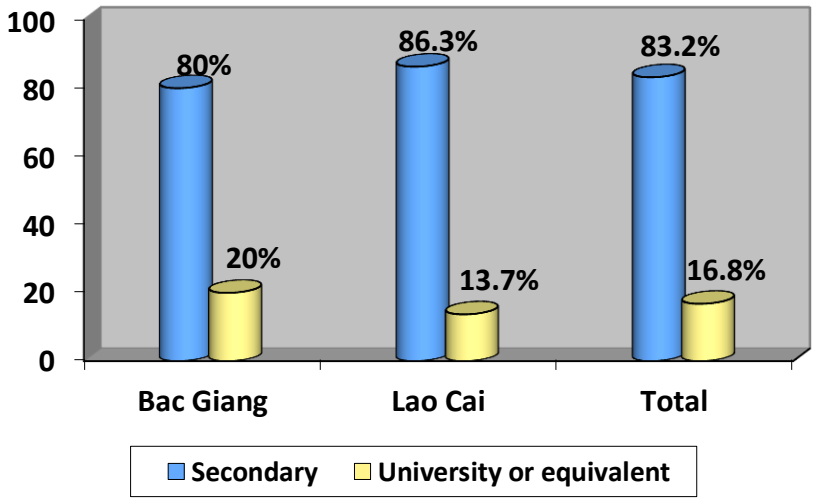


Figure 5.2 Qualification level of midwives in Bac Giang and Lao Cai.

5.4.4 Night shift rostering

Frequent night shift schedules, a type of extra workload, is considered to be an important component of the working environment and is caused by staff shortages (Gurses & Carayon, 2009). Importantly, too frequent night shift rostering can have a negative impact on HW motivation. Literature has shown that fatigue and sleepiness induced by night shift rostering also affects HW performance and hence the quality of health services provided (Estryn-Behar, 2011). This study aims to describe the

night shift schedules which are implemented by HWs at the district and commune levels, and examine the relationship between the frequency of night shifts and HW motivation.

Participants were asked about their night shift rostering. The shift rostering was classified into three different levels: four or fewer nights per month, from 5 to 8 nights per month and more than 8 nights per month. Table 5.12 shows the frequency of night shift rostering by province. The majority (92.7%) of staff in both provinces were rostered for night shifts 4 or more times a month, with similar overall results between provinces.

Table 5.12 Frequency of night shift rostering by province

Night Shift Rostering	Bac Giang (%)	Lao Cai (%)	Total (%)	χ^2	p
≤ 4 days/month	10(7.2)	7(7.5)	17(7.3)	0.07	0.97
5-8 days/month	64(46.4)	42(44.7)	106(45.7)		
>8 days/month	64(46.4)	45(47.8)	109(47.0)		

Table 5.13 shows the frequency of night shift rostering by work area by province. In both provinces, staff working at CHCs reported working more night shifts per month than their colleagues working at district facilities. In Bac Giang, 54.6% of commune health workers (CHWs) worked more than 8 night shifts per month compared to only 14.3% at the district level. Similarly, in Lao Cai, 55.8% of CHWs worked more than eight night shifts per month compared to only 11.8% at the district level.

Table 5.13 Frequency of night shift by work area and by province

	Bac Giang (%)			Lao Cai (%)		
	Shift schedule per month			Shift schedule per month		
Working level	≤ 4days	5-8 days	>8 days	≤ 4days	5-8 days	>8 days
District level*	8(28.6)	16(57.1)	4(14.3)	4(23.5)	11(64.7)	2(11.8)
Commune level	2(1.8)	48(43.6)	60(54.6)	3(3.9)	31(40.3)	43(55.8)

*Note: *District level: only District Hospital staff work night shift*

5.4.5 Training opportunities provided for maternal health workers

5.4.5.1 Training opportunities of staff by province

As indicated in Chapter 3, the competencies of an individual HW consist of knowledge, skills, abilities, and traits. Therefore, pre-service training and in-service training play a critical role in ensuring workers have the appropriate knowledge to perform their tasks as well as to maintain their competencies over time. Given the importance of in-service training, participants were asked about their opportunities to access work-related training in the past 12 months. Training opportunities were further classified into those directly relevant to MH and more general medical or nursing training. Table 5.14 shows the proportion of HWs in each province reporting access to training courses in the past 12 months. Overall, 32.8% of HWs reported no access to training in the last 12 months. However, there was a significant difference in access to training opportunities in the two provinces with 42.5% of staff in Bac Giang reporting they did not attend any training courses compared to only 17.7% in Lao Cai.

Table 5.14 Proportion of HWs reporting access to training courses in the last 12 months

Received training in the last 12 months	**Bac Giang (%)**	**Lao Cai (%)**	**Total (%)**
No	68 (42.5%)	18 (17.7%)	86(32.8%)
Yes	92 (57.5%)	84 (82.3%)	176 (67.2%)
χ^2= 17.45, p <0.001			

Table 5.15 shows the proportion of staff in different facility types reporting access to training courses in the past 12 months. Overall, nearly a half (45.8%) of HWs working in the obstetrics department of DHs and a third (32.3%) of CHWs did not attend any training courses throughout the year. However, most HWs (90%) in RH departments of DHCs attended a training course in the preceding year.

Table 5.15 Training opportunities for MH workers in the preceding 12 months by facility type

Facility type	Did not attend (%)	Attended (%)	Total (%)
RH Dept. of District Health Centre	2 (1)	20 (90)	22 (100)
O&G Dept. District Hospital	22 (45.8)	26 (54.2)	48 (100)
Commune Health Centre	62 (32.3)	130 (67.7)	192 (100)
Total	86 (32.8)	176 (67.7)	262 (100)
χ^2= 9.33, p = 0.009			

Table 5.16 shows the attendance at training courses relevant to MH by participants in the different provinces. Among the 176 people who attended training course in the last 12 months, 15.9% (28 people) did not attend training specific to MH. (That means in total, 114 participants, accounting for 43.5% of the sample did not receive any MH-related training course in the preceding 12 months). In Bac Giang, the proportion of MH workers who did not attend any training course relevant to MH was 17.4%, which was similar to Lao Cai (14.3%).

Table 5.16 Training course attendance within the last 12 months relevant to MH by province

	Bac Giang N(%)	Lao Cai N(%)	Total (%)
Did not attend any training RH course	16(17.4)	12(14.3)	28(15.9)
Attended 1-2 courses	66(71.7)	64(76.2)	130(73.9)
Attended ≥3 courses	10(10.9)	8(9.5)	18(10.2)
Total	92(100.0)	84(100.0)	176(100.0)

5.4.5.2 Reported content of maternal health training attended

Participants were asked to identify the content of MH training opportunities they had attended in the past 12 months from a list of topics and these are shown in Table 5.17. The topics attended were broadly similar between the two provinces. Most training focussed on the practical aspects of reproductive health, maternity and obstetric care.

Table 5.17 Maternal health topics attended by HWs by province

No	Reproductive Health topics	Number of HWs attended		Total (%)
		Bac Giang (%)	Lao Cai (%)	
1	Normal newborn care and newborn emergency care	40 (43.5)	45 (54.2)	85 (48.6)
2	Common diseases of newborns	35 (38.0)	32 (38.6)	67 (38.3)
3	Management of obstetric complications	37 (40.2)	45 (54.2)	82 (46.9)
4	Management of labour stages	31 (33.7)	41 (49.4)	72 (41.1)
5	Antenatal care, during delivery and post-natal care	32 (34.8)	43 (51.8)	75 (42.9)
6	Obstetric ultrasound	5 (5.4)	1 (1.2)	6 (3.4)
7	Safe motherhood	30 (32.6)	30 (36.1)	60 (34.3)
8	Family health planning	31 (33.7)	37 (44.6)	68 (38.9)
9	Prevention of HIV transmission from mother to child	40 (43.5)	34 (40.9)	74 (42.3)
10	Prevention of STDs (sexual transmitted diseases)	36 (39.1)	29 (34.9)	65 (37.1)
11	Communication and counselling in reproductive health	35 (38.0)	32 (38.6)	67 (38.3)
12	Adolescent reproductive health	23 (25.0)	22 (26.5)	45 (25.7)
13	Planning and monitoring the quality of services	18 (19.6)	18 (21.7)	36 (20.6)
14	Report system (related to reproductive health)	22 (23.9)	27(32.5)	49 (28.0)

5.4.5.3 Content of maternal health training reported as needed

Participants were asked to identify from a list of relevant reproductive health topics the training areas that they considered were most needed. The full lists for both provinces are shown in Tables 5.18 and 5.19. Management of obstetric complications, antenatal care, during delivery and post-natal care, communication

and counselling in reproductive health, and management of labour stages were the topics identified as most needed in both provinces.

Table 5.18 Reported MH training needs in Bac Giang province

No	MH topics were reported in need	Numbers identifying topic
1	Management of obstetric complications	70
2	Antenatal care, during delivery and post-natal care	40
3	Normal newborn care and newborn emergency care	34
4	Management of labour stages	32
5	Communication and counselling in reproductive health	29
6	Obstetric ultrasound	24
7	Common diseases of newborn	23

Table 5.19 Reported MH training needs in Lao Cai province

No	MH topics were reported in need	Number identifying topic
1	Management of obstetric complications	40
2	Antenatal care, during delivery and post-natal care	37
3	Communication and counselling in reproductive health	24
4	Safe motherhood	22
5	Obstetric emergency	22
6	Management of labour stages	17
7	Antenatal care, during delivery and post-natal care	15

5.5 SUMMARY

In summary, this chapter has provided a substantial description of the characteristics of the study provinces and MH workers in the study locations which were deemed by respondents to influence HW competencies, motivation and performance. Several differences and similarities between the two provinces in terms of MH workforce and MH service utilisation were found and are presented below.

5.5.1 Common findings that are important in both provinces

Maternal health workforce

Most participants in both provinces were medical doctors, assistant doctors, and midwives. About one third of participants held assistant doctor degrees and the proportion of assistant doctors was similar in both provinces. More than half of the respondents in both provinces had obstetric expertise.

Training opportunity

The MH workers in both provinces did not have many opportunities to undertake further training, with one third of participants in both provinces reporting no access to training in the preceding 12 months.

The training topics related to MH perceived by participants to be most needed included management of obstetric complications, antenatal care, during delivery and postnatal care, communication and counselling in reproductive health and management of labour stages.

5.5.2 Differences between the two provinces in terms of the MH workforce and maternal health service utilisation

Maternal health workforce

The number of participants holding university or equivalent degrees in Bac Giang was significantly higher than in Lao Cai. Participants from Bac Giang had more working experience in MH compared to those working in Lao Cai, and the difference was statistically significant. In Lao Cai, more than 40% of participants were from ethnic minority groups while this figure in Bac Giang was less than 1%.

Training opportunity

With respect to in-service training, more HWs working in Lao Cai reported having training in the preceding 12 months, which is a statistically significant result.

Maternal health service utilisation

The utilisation of maternal health services in Lao Cai province was lower compared to that in Bac Giang province. In Bac Giang, a higher proportion of women had more than three antenatal care episodes, a birth at a health facility and were assisted by skilled birth attendants.

Chapter 6: Individual level factors

6.1 INTRODUCTION

In the conceptual framework set out in Chapter 3, competencies and motivation were described as factors at the individual level that affect health worker (HW) performance. These factors, in turn are affected by external factors, including contextual, organisational and governance-related factors (Franco et al., 2004; Mutale et al., 2013). Given the fact that a number of studies have been conducted to prove the relationships between motivation and competencies and performance of HWs, this study did not intend to examine these relationships. Therefore, this chapter essentially aims to describe the competencies and motivation of HWs in the study locations, and analyse the relationship between these components and potential determinants. This chapter consists of four sections. Section 6.2 describes HW competencies in terms of requisite training and self-rated ability to perform essential obstetric care services (EOCs). It also analyses the association of demographic variables and the outcome 'Ability to perform essential obstetric care services'. Section 6.2 explains the validation of the motivation scale and motivation outcome measured by this scale. The demographic factors influencing motivation outcome are also discussed. Section 6.3 summaries the key findings of the whole chapter.

6.2 HEALTH WORKER COMPETENCIES

Competencies are considered critical determinants of HW performance. Competencies consist of knowledge, skills, abilities and traits (Kak et al., 2001; Williams, 2002). In this study, respondents were asked if they were trained on specific EOCs and to self-rate their ability to perform EOCs assigned for commune and district levels. In this chapter, quantitative associations between variables of interest and outcome variables were evaluated using the following hypotheses:

a) There is an association between qualifications, work experience and training opportunities and competencies (which is represented by 'Ability to perform EOCs').

b) Those HWs who are able to perform more assigned tasks are more motivated compared to their peers who are able to perform less.

6.2.1 Training in Essential Obstetric Care services (EOCs)

In Chapter 5, it was found that 32.8% of participants in both provinces did not have access to any training and 43.5% of participants did not receive MH related training in the preceding 12 months (Tables 5.15 and 5.16, Chapter 5). This section will focus on the specific training in EOCs that enable MH workers to perform these services at their facility.

6.2.1.1 Training in EOCs for health workers at the commune level

According to the national guidance, five EOCs should be provided at the commune health centres (CHCs) and eight EOCs at the district level (United Nations Population Fund, 2006a; Vietnamese Ministry of Health, 2005, 2009; Vietnamese Ministry of Health of Vietnam, 2001). Participants in the CHCs were asked to list the EOCs on which they had received training. The proportion of HWs who were not trained on each EOC is illustrated in Figure 6.1.

The level of training in the five EOCs services that should be delivered at the CHC level are described in Figure 6.1. Nearly half of the participants in Bac Giang and a quarter of the participants in Lao Cai were not trained in how to administer parenteral anticonvulsants (e.g. Magnesium Sulphate in treatment of pre-eclampsia and eclampsia). For placental removal and uterine checking in case of haemorrhage, 10% and 11.5% of respondents in Bac Giang and Lao Cai respectively were not trained.

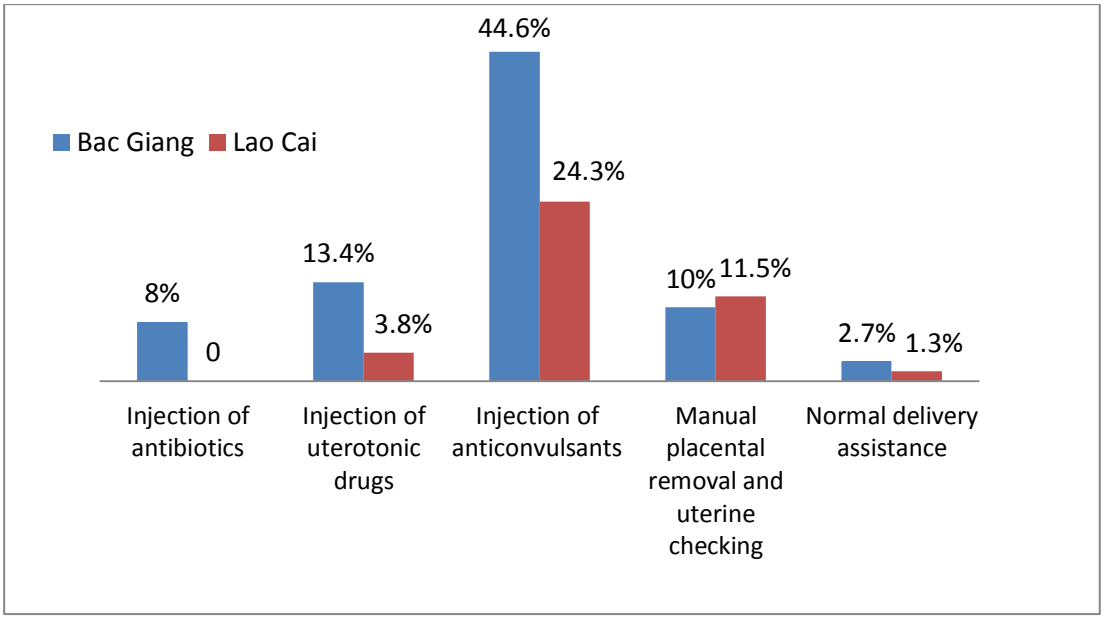


Figure 6.1 Proportion of commune level participants who were not trained in EOCs

6.2.1.2 Training in EOCs for health workers at the district level

The higher role of the District Hospitals (DH) requires an extended set of eight essential obstetric care services. According to Regulation 385 on technical assignment for MH and the National Guidelines for Reproductive Health (Vietnamese Ministry of Health, 2009; Vietnamese Ministry of Health of Vietnam, 2001), the eight EOCs shown in Figure 6.2 were assigned for health facilities at the district level. This does not apply to HWs in Reproductive Health Departments of the District Health Centres (DHC), so this analysis is restricted to HWs working at the Obstetric Department of the District Hospital only. Participants were asked to list the EOCs for which they were trained and the proportion of HWs without training in specific EOCs is described in Figure 6.2.

A high proportion of HWs working in DH were not trained to provide caesarean sections as this service is restricted to being provided by medical doctors. Most participants were trained for the remaining services, with less than 20% of HWs not being trained for uterine checking; uterine curettage for retained placenta; assisted vaginal delivery and blood transfusion.

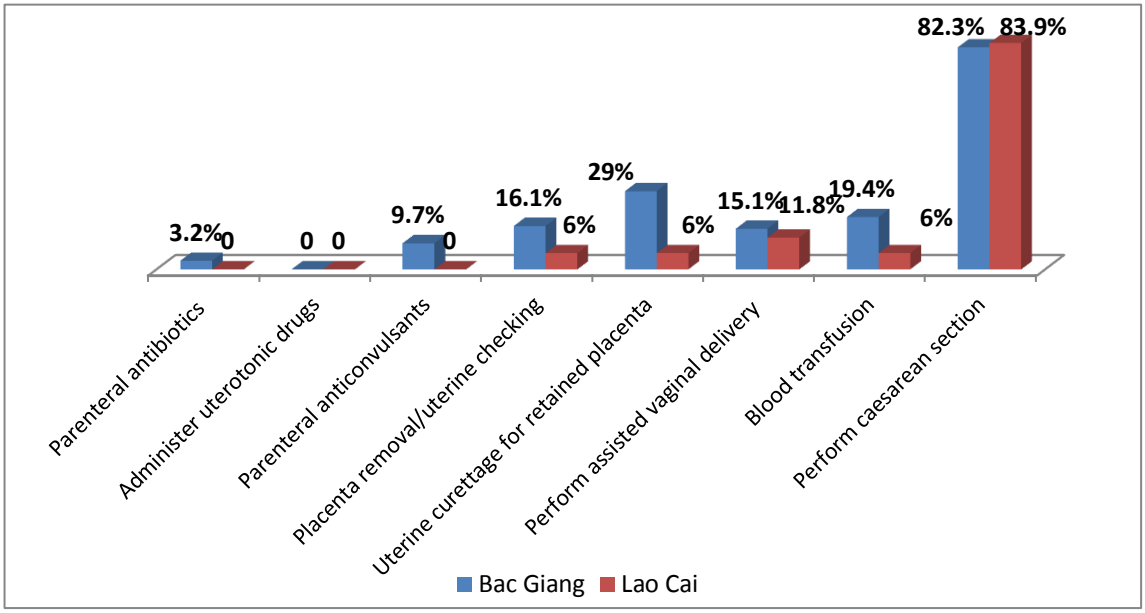


Figure 6.2 Proportion of district level HWs who were not trained in EOCs

6.2.2 Ability of health workers to perform Essential Obstetric Care services

As stated in the literature, the ability of an individual to perform tasks is one important component of competencies (Kak et al., 2001). In this study, self-rated

ability to perform EOCs was used to describe the HW competencies in providing EOCs. Participants from CHCs were asked to rate their own ability to provide EOCs. Reported ability was compared between HWs in different disciplines, different facilities and by province.

Table 6.1 shows the self-rated ability to perform each of the specific EOCs by province. Compared to Bac Giang province, HWs working at the commune level in Lao Cai province were significantly less likely to report being able to inject/transfuse antibiotics (92.9% compared to 69.2%, $\chi^2 = 18.57$, $p<0.001$) and perform the manual removal of placenta and uterine checking in case of haemorrhage (78.2% compared to 58.9%, $\chi^2 = 8.05$, $p=0.005$).

Table 6.1 Self-rated ability of commune health workers (CHWs) to provide five Essential Obstetric Care services

No	Essential Obstetric care services (EOCs)	Bac Giang[a] (%)	Lao Cai[b] (%)	Total (%)	χ^2	p
1	Injection/transfusion of antibiotics	104(92.9)	54(69.2)	158(83.2)	18.57	< 0.001
2	Injection/transfusion of oxytocics	88(78.6)	55(70.5)	143(75.3)	1.60	0.205
3	Injection/transfusion of anticonvulsants	42(37.5)	28(35.9)	70(36.8)	0.05	0.822
4	Manual removal of placenta and uterine checking (in case of haemorrhage)	86(78.2)	46(58.9)	132(70.2)	8.05	0.005
5	Normal delivery assistance	103(93.6)	73(93.6)	176(93.6)	0.0002	0.99

[a]N=112, [b]N=78.

Table 6.2 shows that just over 14% of district level participants from two provinces could perform caesarean section and assisted vaginal delivery, an expected finding given these procedures are restricted to medical doctors (Vietnamese Ministry of Health, 2009). Therefore, less than 15% of district HWs were able to perform all eight EOCs.

District HWs could perform most of these services. There were differences between provinces with fewer in Bac Giang being able to perform placental removal and uterine checking (58.1% compared to 94.1% in Lao Cai, $\chi^2=6.92$, $p=0.009$) and

uterine curettage for retained placenta (45.2% compared to 88.2% in Lao Cai, χ^2=8.52, p=0.004).

Table 6.2 Ability of district health workers to perform eight individual EOCs

No	Essential Obstetric care services (EOCs)	Bac Giang[a] (%)	Lao Cai[b] (%)	Total (%)	χ^2	p
1	Injection/Transfusion of antibiotics	30(93.6)	17(100.0)	47(95.7)	0.56	0.45
2	Injection/Transfusion of oxytocics	29(93.6)	16(100.0)	45(95.7)	1.08	0.3
3	Injection/transfusion of anticonvulsants	26(83.9)	17(100.0)	43(89.6)	3.06	0.08
4	Placental removal/uterine checking	18(58.1)	16(94.1)	34(70.8)	6.91	0.009
5	Uterine curettage for retained placenta	14(45.2)	15(88.2)	29(60.4)	8.52	0.004
6	Assisted vaginal delivery (e.g. vacuum extraction, forceps delivery)	7(14.9)	3(13)	10(14.3)	0.04	0.84
7	Blood transfusion	22(70.9)	15(88.2)	37(77.1)	1.85	0.17
8	Caesarean section	5(16.1)	2(11.8)	7(14.6)	0.17	0.68

[a]N=31, [b]N=17.

6.2.3 Reasons reported by participants for being unable to perform EOCs

Participants were given a choice of four reasons for not being able to undertake each of the EOC tasks. The reasons were 'Because I am not allowed to do it', 'I am allowed to do it, but I am not trained enough', 'Because of lack of drugs and medical equipment' or 'Others'.

Figure 6.3 shows the reasons given by CHWs for being unable to perform each specific EOC. It is noticeable that the most common reason reported by respondents for not being able to perform EOCs was "Because I am not allowed to do it", followed by "Lack of drugs and medical equipment" and "I am not trained enough".

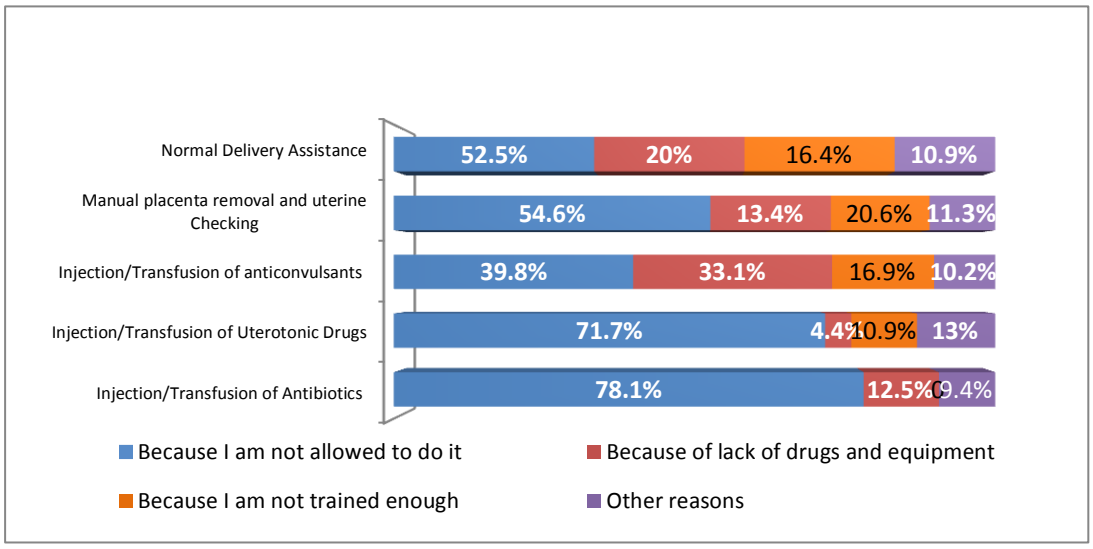


Figure 6.3 Reasons reported by CHWs for being unable to perform EOCs

District level participants were also given a choice of four reasons for not being able to undertake each of the EOCs. Almost all district HWs reported being able to perform injection/transfusion of antibiotics, oxytocics and anticonvulsants. For the remaining services, the most common reasons provided by respondents for not being able to perform were 'Because I am not allowed to do it', followed by 'I am allowed to do it, but I am not trained enough', and 'Because of a lack of drugs and medical equipment'.

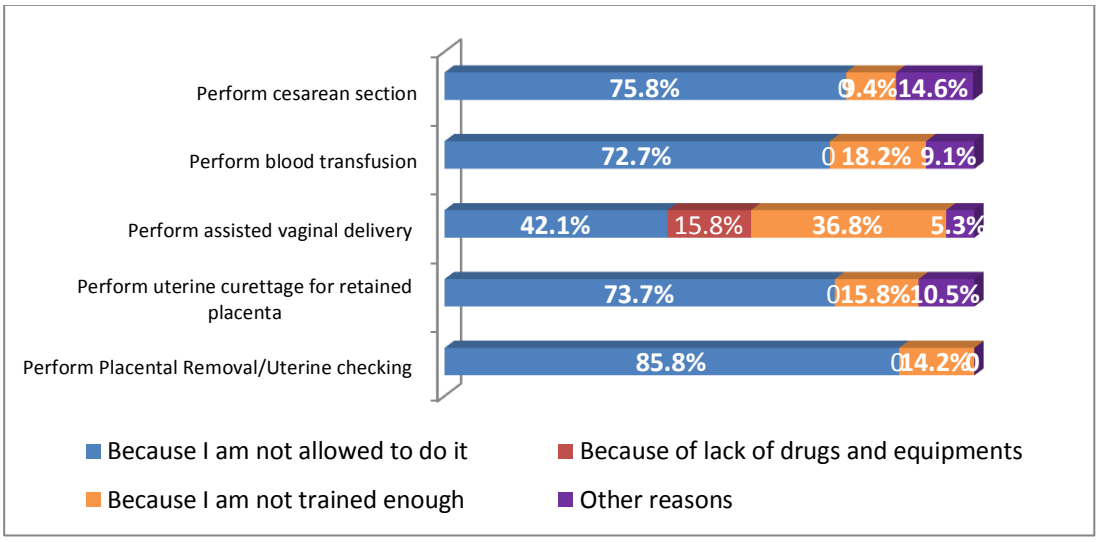


Figure 6.4 Reasons reported by district level participants for being unable to perform EOCs

Analysis of the current regulations and qualitative data helped to explain the above reasons.

First, as presented in Chapter 5 (Figure 5.2), the majority of participants from both provinces were secondary midwives and they were restricted from performing some services by regulation. According to Circular 23/2011/BYT issued by the MOH of Vietnam in 2011 (Vietnamese Ministry of Health, 2011c), only medical doctors and assistant doctors can prescribe drugs and the midwife is permitted to use essential drugs only in emergency delivery cases. This created a common understanding among HWs that the midwives were able to perform EOCs that need drugs in the presence of a medical doctor or an assistant doctor at the health facility. Consequently, during night shifts, when only one midwife was on duty, she was less confident about using essential drugs for patients. Likewise, almost all district hospital managers (who were usually medical doctors) confirmed that the use of parenteral antibiotics, anticonvulsants and oxytocics in hospital required medical doctor authority, although these could be given and monitored by midwives or assistant doctors.

Second, a lack of medical equipment and drugs was considered to impede CHWs' ability to perform EOCs. The availability of Magnesium Sulphate is one typical example. Respondents acknowledged in the interviews that almost none of the CHCs at the study locations had this drug, even though it is considered an essential drug that should be always be available in appropriate quantity and quality. However, this situation is not specific to these provinces but is common nationwide (Vietnamese Ministry of Health, 2011a). These findings mirror Armenian research where the availability of resources was found to be significantly related to actual performance in prenatal care (Fort & Voltero, 2004). In addition, the supplies of medical equipment for MH services in the Vietnamese provinces were reported as inadequate. Some essential instruments, such as sets for delivery, were provided years ago and were deemed to be in poor condition. The details of medical equipment and drugs are discussed in Chapter 9.

Third, it was reported that a high proportion of participants were not trained in the EOCs as shown in Figures 6.1 and 6.2, which was consistent with the reasons given by respondents in the interviews. Moreover, other issues, such as the relevance and adequacy training courses may be potential causes of low proportion of HWs reported being able to perform all EOCs. The qualitative results about training opportunities in MH are discussed in Chapter 9.

6.2.4 The Association between the outcome variable 'Ability to perform EOCs' and variables of interest

Data preparation

The ability of CHWs to provide EOCs were divided into those who could perform four or more, compared to those reporting being able to perform fewer than four EOCs. Workers reporting being able to perform three or fewer EOCs were coded 0 and those reporting four or five EOCs (equivalent to or more than 80% of the total number of EOCs) were coded 1.

Similarly, for HWs at the district level, a cut-off point of six EOCs was applied. Those cases where workers reported being able to perform less than or equal to five EOCs were coded 0 whereas cases in which workers reported being able to perform 6-8 EOCs (equivalent to or more than 75% of the total number of EOCs) were coded 1.

The outcome variable 'Ability to perform EOCs' was then created by combining 'CHWs Ability to perform EOCs and 'District HWs Ability to perform EOCs. This variable was an binary variable, where 0 represented being able to perform less than 75% of the total number of EOCs, and 1 represented being able to perform at least 75% of the total number of EOCs. Three independent variables were selected to add to the model: 'Technical Position', 'Work Experience' and 'Training Opportunities'. 'Less than 10 years of work experience' was chosen as the reference for 'Work Experience'; 'Assistant doctor' was chosen as the reference for "Technical Position"; and "Not being trained all EOCs" was the reference for the independent variable 'Training Opportunities'.

Before conducting logistic regression, the assumption of a lack of multicollinearity was checked by an examination of the variance inflation factor (VIF) and correlation matrix. As a rule of thumb, where the VIF values exceeds 10 it is likely that the regression coefficients will be poorly estimated. Similarly, high correlation coefficients (higher than 0.8) of predictors indicate collinearity. For this current model, the VIFs were all below 5 and tolerance statistics all above 0.2 confirmed that there was no significant collinearity within the data (Field, 2009, p. 242).

The model summary provides the -2 Log likelihood and pseudo R^2 value for the full model. Fitting the model produced a significant reduction in the -2 Log

likelihood statistics indicating that the new model (with explanatory variables) is a significantly better fit than the null model. The Hosmer and Lemeshows test of the goodness of fit suggests the model is a good fit to the data as p=0.35 (>0.05). The detail of the model is presented in Table 6.3.

This table provides the regression coefficient (B), the Wald statistic (to test the statistical significance) and the all Odds Ratio (OR) for each variable category. Work Experience was strongly associated with 'Ability to perform EOCs'. Those participants who had more than 10 years of experience were about 2.76 times more likely to report being able to perform more EOCs than those people who had less experience. The effect of Training Opportunities was also significant and positive, indicating that those HWs who were trained in all EOCs were two times more likely to report being able to perform at least 75% of the total number of EOCs assigned to their level.

Table 6.3 Association of 'Ability to perform EOCs' and independent variables

	Model 1			**Model 2**		
Variables	**B**	**SE**	**OR**	**B**	**SE**	**OR**
Constant	-1.32	0.55	0.27	-1.71	0.58	0.18*
Work experience						
More than or equal to 10 years (base=less than 10 years)	0.99	0.29	2.69**	1.02	0.3	2.76**
Technical position						
Midwife	0.07	0.32	1.08	0.19	0.33	1.21
Medical doctor (base= assistant doctor)	0.68	0.38	1.97	0.63	0.38	1.88
Training opportunities						
Being trained on all EOCs (base=not being trained on all EOCs)				0.72	0.28	2.05*
-2LL	315.77			309.16		
Nagelkerke R^2	10%			15%		
	χ^2=19.91, df=3, p<0.001			χ^2= 26.52, df=4, p<0.001		
Hosmer & Lemeshow test	p=0.35			p=0.16		
Classification accuracy	64.4%			66.4%		

**p<0.01; **p<0.001*

Discussion

As explained in the conceptual framework, HW competencies are defined in the context of their knowledge, skills, abilities and traits. There are several ways that a HW can obtain knowledge including pre-service training education (e.g. qualifications), in-service training and on-the-job experience (Kak et al., 2001). In the current study, results showed a strong association between 'Ability to perform EOCs' and 'Being trained in all EOCs'. Our findings mirror the result of a previous study in Armenia that showed a strong association between being trained in the use of tools and HW performance in postpartum care (Fort & Voltero, 2004). Given these facts, in-service training plays an important role in improving HW knowledge, and further developing their competencies.

However, research conducted to measure knowledge and skills of MH workers in multiple African countries showed that knowledge of a procedure is no guarantee that it can be performed correctly (Harvey et al., 2007). It indicated that although the knowledge score on the management of postpartum haemorrhage was relatively high (63%), the skills scores for manual placenta removal and bimanual uterine compression in controlling postpartum haemorrhage were 41% and 22% respectively.

The results of this study also showed that 'Work Experience' had a strong association with 'Ability to perform EOCs'. This finding is consistent with the result of a study in the Malian context where years of experience associated with higher HW competency score. While previous study in an African setting found a high correlation between professional profiles (including medical doctors, nurses, medical students) and MH skill scores (Harvey et al., 2007), this study did not indicate an association between qualifications and the ability to perform EOCs.

The obvious conclusion to be drawn is that work experience and in-service training opportunities in EOCs are all strongly associated with 'Ability to perform EOCs'. Result from this study confirmed the WHO position that pre-service education and in-service training are very important in helping HWs to reach a level where they can be certified as competent (World Health Organisation, 2006). Competency and motivation, in turn will influence performance and the quality of services that HWs provide.

This chapter has particularly focused on the individual level factors that affect HW performance. However, these factors are influenced by other factors at broader levels, namely the contextual, governance and organisational factors. These factors will be explained in Chapters 7, 8 and 9.

6.3 HEALTH WORKER MOTIVATION

In the model underpinning this research (see Chapter 3), HW motivation is an important modifying factor for a number of other factors, as well as itself being impacted by the same variables. In order to examine the effect of HW motivation quantitatively, a reliable and valid scale suitable for a self-administered survey was sought in the literature. No validated scale for HW motivation developed or validated for surveys with Vietnamese MH workers was identified in the literature or through inquiry with local experts. Therefore, validation of a new instrument for measuring HW motivation became an essential task for this study. It was decided to adopt and adapt a questionnaire developed and used with Kenyan health workers (Mbindyo et al., 2009). This was chosen over other options because it was considered that the organisational structure and state of the Vietnamese health workforce was more similar to the organisation of Kenyan health workforce than those of developed countries, where most other scales had been developed and used.

This scale had not been previously used in Vietnam and so its validity and reliability in this worker population was unknown. Moreover, as detailed in Chapter 4, some changes to the items were necessary to ensure to be culturally and linguistically appropriate. Consequently, it was considered important to examine the scale to see if the same clusters of items (factors) that were identified in the original Kenyan study were also present in this study population.

The process of validating the motivation scale was broken down into two phases. In the first phase, the translation of the original scale of 23 items was reviewed with five MH workers working in district and commune health levels. Based on the feedback from these reviewers, minor adjustments to some items were made. The scale was then pre-tested on 20 MH workers in order to ensure that items were relevant to participants and the content was culturally acceptable. The response format for the scale was a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

In the second phase, the factor structure was analysed using Exploratory Factor Analysis (EFA). The reliability was measured using internal consistency. After modification according to the above analysis, the final version of 22 items was used in the main study. The detailed results of this analysis will be described in the next paragraph.

6.3.1 Validation of the motivation scale

Description of the Motivation Scale

In summary, the instrument had 22 items, with answers given on a scale of 1 to 5 (strongly disagree to strongly agree). The items with negative statements were reverse coded when calculating scores. Data from the 262 participants was entered into Epidata 3.1 and the file exported to SPSS version 19 for analysis. There were no missing values. Mean scores clustered centrally with the lowest score being 2.63 ('I do this job as it provides long term security for me') and the highest 4.56 ('I am punctual about coming to work').

6.3.2 Factor analysis

It is evident from the literature that different methods of factor analysis have their strengths and weaknesses, and the choice of which to use depends on the context and requirements of the study. However, EFA has been suggested as the starting point for most studies, especially in health services research (Pett, Lackey, & Sullivan, 2003).

The goal of EFA is to determine the number of factors extracted and the structure of each factor. EFA is a multistage procedure that requires a degree of subjectivity in its interpretation and it is generally agreed that there is no correct and unique solution. Comprehensive reviews and study of key decisions, such as determining sample size, the number of factors, and the method of rotation, guide researchers in their decision making. EFA was carried out to examine the factorial validity of the scale, and to determine the number of common factors influencing the measures in the scale and the strength of the relationship between each factor.

EFA further refined the scale by revealing which items in the scale could be dropped, as they contributed little to the presumed underlying factor matrix. By using principal components analysis (PCA), direct oblimin rotation, Kaiser's 'Eigen values greater than one' rule, and the Scree test, it was possible to retain the number of factors that gave the most interpretable solution, and to determine how well the

model fitted the data. The approach taken follows the steps shown in Figure 6.5 and the results will be described progressively.

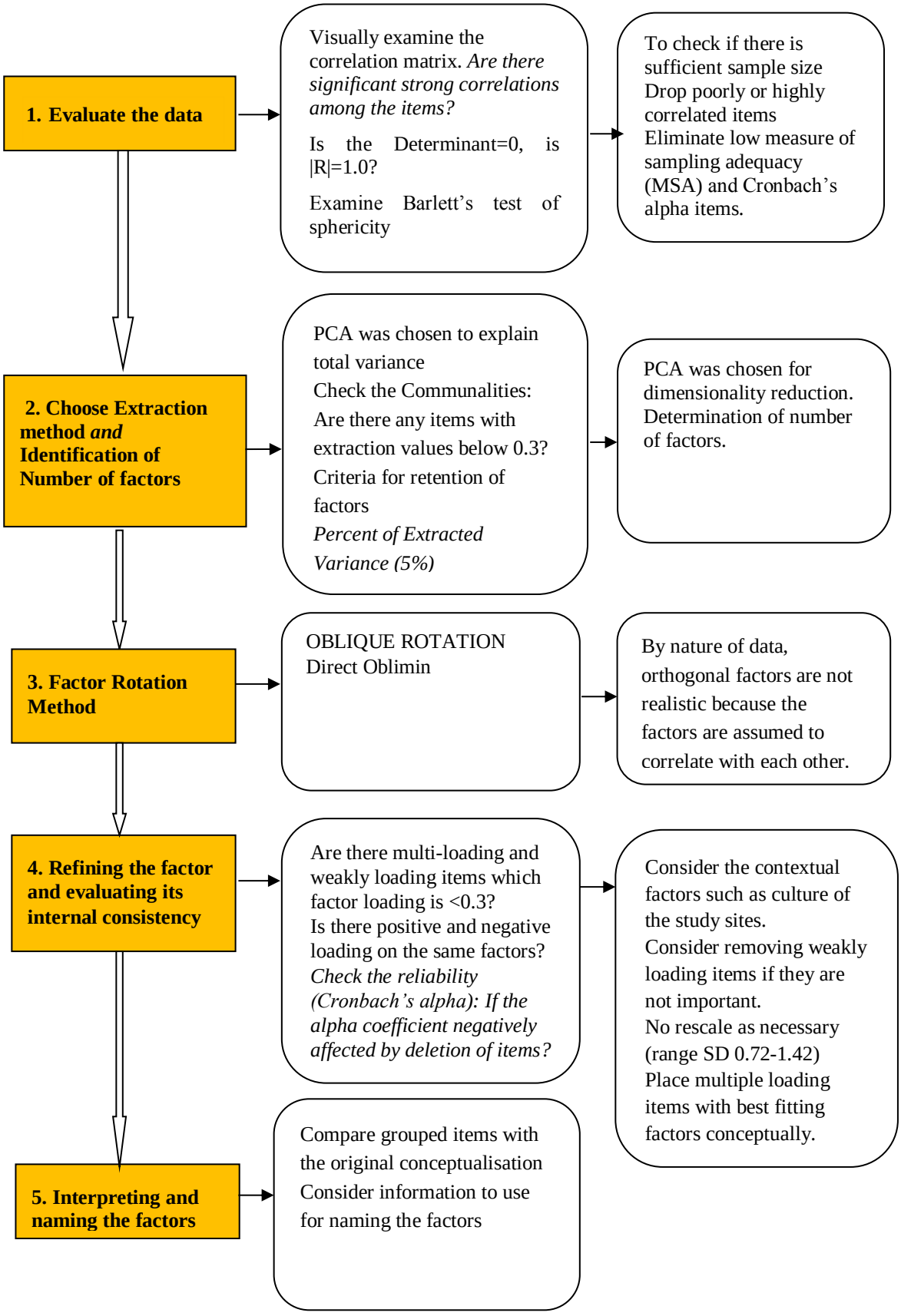


Figure 6.5 Steps to conduct exploratory factor analysis

Step 1: Evaluate the Data

The correlation matrix summarises the interrelationships among the set of items in the scale. The determinant of the matrix was calculated to see if the correlation matrix was an identity matrix or a singular matrix (that is whether one or more factors were likely within the items). The results showed that the determinant = 0.001, that is $0< |R|<1$.This indicated that the correlation matrix was neither singular nor identity and therefore factor analysis was advisable (Pett et al., 2003, pp. 71-72), (Field, 2009, p. 648).

Also, the anti-image covariance and correlation matrices were examined. All the values of individual items, the measures of sampling adequacy (MSA) were higher than 0.7, except for one or two items whose value was around 0.65 (Pett et al., 2003, pp. 82-83).

Prior to conducting the EFA, the suitability of the data for this analysis was assessed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy index was 0.82, and Bartlett's test of Sphericity was significant, (χ^2=1871.85, p<0.001), indicating that the sample and correlation matrix were appropriate for factor analysis (Field, 2009; Pett et al., 2003, p. 651). Six rotated factors accounted for 25.22%, 10.8.0%, 7.4%, 6.7%, 5.8% and 5.2% of the variance in the 22-item motivation score. Overall, 61.2% of the total variance could be explained by these latent variables.

Step 2: Choosing the Extraction method

Principle Component Analysis was used in factor extraction. Principle Component Analysis identifies clustering of factors that share an underlying variance. In principle, a higher communality value confirms the importance of the factor. In this analysis, no item had a low extraction value and thus did not impact significantly on the overall communality value of the latent factors.

Identification of the number of factors

Table 6.5 presents the percentage of total variance accounted for by each factor, and the cumulative percentage of total variance accounted for by the factors. This table shows that almost 61.2% of the total variance was attributable to six factors, suggesting that a model with six factors may be adequate to represent the

data (Pett et al., 2003). Ideally, the retained factors should account for at least 60%, and preferably 75%, of the variance (Norman & Streiner, 2003).

In addition, the Eigenvalue and Scree plot are two conventional criteria for determining the number of unrotated factors to be extracted (Ho, 2006). All these factors had an eigenvalue higher than 1, and the Scree plot indicates that a 6 factor model should be sufficient to represent the data. The last factor accounts for only 5% of the explained variance which meets another criteria (Pett et al., 2003). Detail of explained variance of factors is presented in Table 6.4.

Table 6.4 Total of explained variance of factors

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.55	25.25	25.25	5.55	25.25	25.25
2	2.38	10.83	36.07	2.38	10.83	36.07
3	1.63	7.40	43.48	1.63	7.40	43.48
4	1.48	6.74	50.22	1.48	6.74	50.22
5	1.27	5.75	55.98	1.27	5.75	55.98
6	1.15	5.22	61.20	1.15	5.22	61.20

Step 3: Choosing the Rotation method

Given the assumption that there is some correlation between two or more of the factors being rotated, the oblique rotation was applied (Pett et al., 2003). The oblique rotation often provides a more accurate reflection of reality even though it is more complex to interpret (Norman & Streiner, 2003). Since Promax is suggested for a large data set, Direct Oblimin was selected as the rotation method for the current study (Field, 2009, pp. 642-644). From the Structure Matrix, items were grouped based on the factor loading above 0.4 while still taking into account the original structure of the instrument. The structure of factors is presented in Table 6.5.

Table 6.5 Rotated loadings of the Motivation Scale

Factors and items		Factors					
		1	2	3	4	5	6
Factor 1	This facility really inspires me to do my very best on the job	**0.82**	0.0	0.03	0.05	-0.2	0.26
	I am proud to be working for this facility	**0.80**	0.02	0.16	0.06	-0.09	0.39
	I am glad that I work for this facility/organisation rather than other facilities	**0.78**	0.04	0.04	0.03	-0.02	0.36
	I find that my goals and this organisation's goals are very similar	**0.77**	-0.02	-0.02	-0.11	-0.18	0.35
	Overall, I am very satisfied with my job	**0.68**	-0.01	0.09	0.08	-0.19	0.48
	I am satisfied with the opportunity to use my abilities in my job	**0.67**	0.05	0.15	0.09	-0.17	0.38
	I am satisfied that I accomplish something worthwhile in this job	**0.60**	0.16	-0.05	0.05	-0.11	0.41
Factor 2	I am not satisfied with my colleagues in my department/facility	0.05	**0.76**	-0.16	-0.16	-0.19	0.07
	I feel very little commitment to this facility	-0.03	**0.67**	0.19	-0.22	-0.07	-0.15
	I am satisfied with my supervisor	0.11	**0.64**	0.14	0.17	-0.29	-0.11
Factor 3	I am not worried about being late	0.09	-0.08	**0.77**	0.09	0.05	-0.13
	It is not a problem if I sometimes come back late at work	-	0.12	**0.72**	-0.08	-0.11	0.24
	People do not rely on me at work	0.07	0.40	**0.53**	-0.28	-0.11	0.32
Factor 4	I only do this job so that I get paid at the end of the month	-0.03	0.07	-	**-0.79**	-0.21	-0.01
	I do this job as it provides long term security for me	-0.26	0.30	-0.10	**-0.70**	0.19	-0.11
	These days, I feel motivated to works as hard as I can	0.37	0.004	0.27	**-0.56**	-0.14	0.10
Factor 5	Sometimes when I get up in the morning, I dread having to face another day at work	0.18	0.09	0.11	-0.10	**-0.90**	.047
	I feel emotionally drained at the end of every day	0.10	0.28	-0.04	-0.04	**-0.85**	.011
Factor 6	I am a hard worker	0.43	-0.15	0.03	-0.09	-0.04	**0.80**
	I always complete my tasks efficiently and correctly	0.45	-0.10	0.16	-0.01	-0.14	**0.79**
	I am punctual about coming to work	0.56	0.09	0.20	0.12	0.05	**0.72**
	I do things that need doing without being asked or told	0.40	-0.07	-	0.20	0.00	**0.67**

Step 4: Refining the factor and evaluating its internal consistency

Internal consistency

The Cronbach's alpha was assessed for the internal consistency of the scale and its subscales. It is broadly acknowledged that a value of Cronbach's alpha between 0.6 and 0.7 indicates acceptable reliability, and 0.8 or higher indicates good reliability (Field, 2009; Pallant, 2001). Among 262 participants in the study, the motivation scale yielded a good reliability with a Cronbach's alpha of 0.77. The coefficients for the six subscales were 0.87, 0.57, 0.51, 0.52, 0.79 and 0.74 respectively. Since the alpha value is sensitive to and dependent on the number of items, several authors have argued that in a short scale, low Cronbach's alpha scores for several factors can be acceptable particularly in social science data (Kline 1999 cited by Field, 2009, p. 680; Pallant, 2001).

Step 5: Interpreting and Naming factors

The process of interpreting and naming factors was based on the original structure of scale and the meaning of items within each factor. Factors were named as explained in Table 6.6.

Table 6.6 Explanation of the factor naming process

	Cronbach's alpha	**Note**
Job Satisfaction	0.87	The original factor includes only three items. New items were loaded on this latent factor with high factor loadings (see Table 6.7). Considering the meanings of items loading on this factor, this factor was named Job Satisfaction.
Workplace Relations	0.57	The original tool does not include this latent factor. The items come from other factors and all loaded on this factor with factor loading above 0.6. Considering the meaning of items loading on this factor, this factor was considered to reflect Work place Relations.
Timeliness and Attendance	0.51	The original construct Timeliness and Attendance consists of the item "I am punctual about coming to work" but it was loaded strongly on the Conscientiousness factor and does not load in this factor. The item "People do not rely on me at work" loaded in other factors but had highest factor loading of 0.53 when loaded in this factor. Therefore, this item was put in this factor.

General Motivation	0.52	This construct is similar to the General motivation construct in the original scale.
Burnout	0.74	This Burnout construct is similar to the construct in the original scale. Though factors with less than three items are generally considered to be weak or unstable, this factor was retained because the items were highly inter-correlated (r=0.74) and relatively uncorrelated with other variables (Worthington & Whittaker 2006 cited byDelobelle et al., 2010).
Conscientiousness	0.79	Only the item "People do not rely on me at work" loaded in another factor, whereas three other items remain in this factor as set out in the original scale.
Total scale	0.77	

In conclusion, 22 items from the original instrument were retained but only six factors were extracted. This included one latent factor, called Workplace Relations while two of the original latent factors Organisational Commitment and Intrinsic Satisfaction did not appear in the factor analysis of the modified scale. The items associated with the original two latent factors mostly loaded on the construct Job Satisfaction.

Motivation outcome constructs

The mean score for each of the 22 items is presented in Table 6.7. The means were calculated with the scoring of negative questions reversed so that higher means indicate higher motivational outcomes regardless of the meaning of questions (Mbindyo et al., 2009). The highest mean scores were for Conscientiousness suggesting that HWs were highly responsible in relation to their work. However, the lowest mean scores were for General Motivation, particularly for the question "I do this job as it provides long term security for me" suggesting that the HWs were not motivated by the limited aspects of their jobs and that job security was of great importance.

Table 6.7 Motivation outcome constructs

Construct	Questions	Mean score (1-5)	SD
Job Satisfaction	Overall, I am very satisfied with my job	4.07	1.00
	I am satisfied with the opportunity to use my abilities in my job	4.02	0.99
	I find that my goals and this organisation's goals are very similar	3.80	1.10
	I am glad that I work for this facility/organisation rather than for other facilities	4.04	1.05
	I am proud to be working for this facility	4.18	0.92
	This facility really inspires me to do my very best on the job	3.96	1.04
	I am satisfied that I accomplish something worthwhile in this job	4.37	0.90
Conscientiousness	I always complete my tasks efficiently and correctly	4.31	0.78
	I am a hard worker	4.26	0.78
	I am punctual about coming to work	4.56	0.72
	I do things that need doing without being asked or told	4.30	0.84
Workplace Relations	I am satisfied with my supervisor	3.65	1.42
	I am not satisfied with my colleagues in my department/facility	3.74*	1.40
	I feel very little commitment to this facility	3.43*	1.26
General Motivation	I do this job as it provides long term security for me	2.74*	1.01
	These days, I feel motivated to work as hard as I can	3.52	0.87
	I only do this job so that I get paid at the end of the month	3.11*	1.28
Burnout	I feel emotionally drained at the end of every day	3.65*	1.11
	Sometimes when I get up in the morning, I dread having to face another day at work	4.02*	1.09
Timeliness and Attendance	People do not rely on me at work	3.97*	1.09
	I am not worried about being absent from work	3.44*	1.24
	It is not a problem if I sometimes come back late to work	3.82*	1.18

*Note: * These questions were reversed so a high score does not show agreement with the statement.*

From the interviews, it became evident that the concept of "Organisational commitment" was understood to mean having a stable job with sufficient income. For those participants from rural backgrounds, being close to their home town and family was perceived as very important, and that appeared to be a reason they felt

satisfied with their current job and remained in their positions. This suggests that respondents may not differentiate between Organisational Commitment and Job Satisfaction, which can be interpreted by the grouping of Organisational Commitment items with Job Satisfaction items in one new construct.

6.3.3 Association between the motivation scores and other independent variables

Data preparation

Multiple regression modeling was used to identify the independent effect of factors on total motivation scores, which was calculated by summing the scores on the 22 items. The independent variables selected were 'Gender', 'Received training in the preceding 12 months', 'Ability to perform EOCs', 'Shift Schedule' and 'Working Level'. Hierarchical regression was the method employed in this analysis. The predictors were chosen based on the literature. Known predictors were entered first into the model, followed by other predictors.

Table 6.8 Measurement scale and coding of variables

Variables	Measurement scale	Coding
Gender	Categorical, Dichotomous	1=Male; 2=Female
Working Level	Categorical, Dichotomous	1=District level 2=Commune level
Received training in the preceding 12 months	Categorical, Dichotomous	1=No; 2=Yes
Shift Schedule	Categorical, Nominal	1= less than 4 days per months; 2= 5-8 days per months; 3= more than 8 days per month
Ability to perform EOCs	Categorical, Dichotomous	0=Able to perform less than 75% of total number of EOCs; 1=Able to perform more than or equal to 75% of number of EOCs

Variance inflation factor (VIF) and tolerance were checked to ensure no collinearity among independent variables. The mean, standard deviation (SD) and bivariate coefficients among variables were calculated and are presented in Table 6.9. No large correlation coefficients ($r>0.8$) were found in this correlation matrix.

Table 6.9 Means, Standard Deviations, and Inter-correlations for Total Motivation scores and other variables

Variables	**Mean**	**SD**	1	2	3	4	5
Total motivation scores	85.32	9.72	0.13*	-0.13*	-0.13*	0.19**	-0.004
Predictor variable							
1. Gender	1.72	0.45	1.000	-0.04	-0.12*	-0.04	-0. 26**
2. Received training in past12 months	0.67	0.47		1.000	0.02	0.07	0.03
3. Shift schedule	2.44	0.6			1.000	0.06	0.34**
4. Ability to perform EOCs	6.44	0.48				1.000	0.08
5. Working level	1.83	0.38					1.000

*p<0.05, **p<001

Table 6.10 shows the results of the hierarchical multiple regression analysis. The results showed that in Step 1, the combination of 'Gender', 'Received training in preceeding12 months' and 'Ability to perform EOCs" accounted for 7% of the variance in total motivation scores ($F_{(3,221)}$ = 5.89, p=0.001). The addition of 'Working Level' and 'Shift Schedule' in Step 2 significantly increased prediction so that 10% of the variance of total motivation scores was explained ($F_{(5,219)}$ = 4.59, p=0.001). The variables that were independently significant predictors were 'Gender', 'Training opportunities', 'Ability to perform EOCs', and 'Shift Schedule'.

Table 6.10 Multiple regression model for the predictors of health worker motivation scores

	Variable	B	SE B	β	t	p
Step 1	Constant	82.67	3.48		28.5	<0.001
	Gender	2.86	1.39	0.13*	2.05	0.04
	Received training in past 12 months	-2.92	1.34	-.014*	-2.18	0.03
	Ability to perform EOCs	4.09	1.32	0.20**	3.11	0.002
Step 2	Constant	85.38	5.34		16.00	<0.001
	Gender	2.87	1.43	0.13*	2.00	0.05
	Received training in past 12 months	-2.91	1.33	-0.14*	-2.17	0.03
	Ability to perform EOCs	4.16	1.31	0.21**	3.18	0.002
	Working level	1.82	1.81	.071	1.01	0.31
	Shift schedule	-2.52	1.13	-0.15*	-2.23	0.03

Dependent Variable: Total motivation scores; N= 225, p<0.001

Note: R^2 = 0.07 for Step 1, $\triangle R^2$ = 0.03 for Step 2 (p<0.01**, p<0.05*).

Discussion

This study found a number of factors associated with total motivation score, although overall these factors accounted for only a small amount of the total variation.

It is evident that 'Ability to perform EOCs' was strongly associated with total motivation scores. MH workers who were able to perform more EOCs tended to have higher motivation scores. This finding confirms the hypothesis that those HWs

who are able to perform the more difficult assigned tasks are more motivated compared to their peers. Therefore, this finding helps to explain the relationship between competencies and motivation of an individual HW, as set out in the conceptual framework presented in Chapter 3.

Gender also had an effect on motivation scores. The results showed that female workers were more motivated than male workers. This finding is consistent with research conducted in Kenya and Zambia which employed a similar motivation scale (Mbindyo et al., 2009; Mutale et al., 2013). However, research conducted in Jordan found that female workers had significantly lower motivation scores than male workers, and in Georgia there was almost no difference in motivation between genders (Franco et al., 2004).

Another predictor of importance is night shift schedule. Night shift schedule was modestly associated with motivation scores, so that those participants who had more frequent shift schedules (5-8 nights or more per month) were likely to have lower motivation scores. Most participants working at CHCs and the Obstetrics Department of DH worked night shifts and many of them had more than 8 nights per month. Research has shown that frequent shift work is negatively correlated with HW motivation and satisfaction (Chandler et al., 2009) and heavier workload can be considered a de-motivator (Witter et al., 2011).

It has been stated in the literature that training opportunities are associated with higher motivation scores (Mutale et al., 2013) and broadly are considered a motivating factor (Dieleman et al., 2003; Dieleman et al., 2006). In this study, the results showed that 'Received training in the preceding 12 months' was associated with total motivation scores but not strongly. However, the negative relationship between the training and motivation of respondents could be explained by the comments made in HW interviews stating that they had few opportunities to practice what they learnt after training courses due to low service utilisation. Further discussion on this issue is detailed in Chapters 7 and 9.

A significant point is that all the items of the construct 'General Motivation' had low mean scores, suggesting that generally, respondents in the study locations were not highly motivated. This was confirmed by the feelings and perceptions of respondents about their current jobs as revealed in interviews.

The low R square of this model implies that this regression model has explained only a small percentage of the total variation, suggesting that there might be other important predictors contributing to the model. Hence, further studies on determinants of HW motivation are necessary to identify other factors and to confirm their relative importance.

6.4 SUMMARY

In terms of individual level factors, the study focused on two aspects of HW performance, the health worker competencies (which included training opportunities and self-rated ability to perform EOCs), and motivation. The results in this chapter showed that there were few training opportunities in EOCs provided for MH workers in the study locations. In addition, the results showed that the restrictions on professionals able to perform EOCs, and the availability of resources were important factors influencing the ability of HWs to perform EOCs. These barriers evidently influenced the self-rated ability to perform EOCs, competencies and hence affected HW motivation and performance.

The study showed that those HWs who had more work experience and were trained in all EOCs tended to report being able to perform more EOCs. The results also indicated the associations between total motivation scores and gender of HWs, frequency of night shifts and whether HWs received training courses in the preceding 12 months. More importantly, it demonstrated that those HWs who reported being able to perform more EOCs tended to have higher motivation scores. This implies an association between HW competencies and motivation. This study was based on the published evidence of a relationship between HW motivation and performance (as presented in Chapter 3) and did not intend to examine this relationship.

The data showed relatively high levels of job satisfaction, conscientiousness, timeliness and attendance which should be reflected in high levels of motivation. However, while the motivation mean score of 85.14 out of 110 (the maximum scores of 22 items) suggests that on average, participants were more positive than negative, it indicates that there is still room for improvement in motivation of HWs. It has been long recognised that at the individual level, good performance requires adequate competencies and motivation to maintain standards. This chapter also contributes to existing theories stating that the individual factors are strongly influenced by external factors, which will be discussed in detail in Chapters 7, 8 and 9.

Chapter 7: Contextual factors

7.1 INTRODUCTION

The conceptual framework of this study (presented in Chapter 3) suggested that contextual factors may be external factors that influence HW performance, motivation and competencies. This chapter aims to describe how participants perceived contextual factors affecting their motivation and performance. This chapter starts by looking at the differences between the two study provinces in terms of the geographical conditions (Section 7.2). It is then followed by Sections 7.3 and 7.4 which examine the influence of client expectations and ethnicity on MH service utilisation. Section 7.5 describes the determinants of utilisation of MH services in the two provinces. Section 7.6 explains the relationship between contextual factors and HW motivation and performance.

The cultural context and characteristics of the population being served were considered to be one of the key contributors to HW motivation and performance (Franco et al., 2002; World Health Organisation, 2006). According to Kak et al. (2001), cultural and social factors encompass community expectations, peer pressure, patient expectations and social values. An increasing number of studies have focused on the cultural and social context including the interaction between HWs and clients, recognition of supervisors, or support of family and community (Chandler et al., 2009; Razee et al., 2012). However, little has been done to investigate the characteristics of the population being served, such as client expectations, geographical conditions and ethnicity, and how they affect HW competencies, motivation and performance. In the light of a broadly existing agreement that characterises the influence of population over service utilisation (Duong, Binns, & Lee, 2004; Gabrysch & Campbell, 2009), the discussion in this chapter centres on the relationship between the characteristics of the population, service utilisation, and HW competencies, motivation and performance.

7.2 GEOGRAPHICAL CONDITIONS

The first contextual factor examined in this study was geographical conditions that were perceived by respondents to affect service utilisation. Poor road infrastructure and long distance to health facilities were reported to influence the

utilisation of services, such as skilled birth attendance (Gabrysch & Campbell, 2009; Matsuokaa, Aigab, Rasme, Rathavy, & Okitsuh, 2010). In this study, HWs demonstrated strong views about the impact of distance to a health facility on the utilisation of maternity services. The difference in geographical conditions between the two study locations and their influence on MH services will be analysed in this section.

7.2.1 Geographical conditions in Lao Cai province

Lao Cai is located in a high mountainous area. In mountainous provinces, distance is a major barrier to utilisation of health services, particularly for poor women (United Nations Population Fund, 2008b). Riding by motorbike and walking are the only available means of transport, although in many villages there is no option other than walking. It takes many hours or more than half a day to walk from several of the villages to the CHC. The majority of clients must walk along rocky, steep and dirt roads. In Sa Pa district, except for the town located in the district's centre, transportation within all 17 communes and from these communes to the district's centre is very difficult. It is about 48 km from the district's centre to the furthest commune. A manager explained:

"It is difficult for ethnic people, particularly those people living in my area. The furthest village is 7km from the CHC. It is quite complex for them to travel to us. The road is very bumpy and walking is the only mean of transport for the remote villagers".

Commune level _Manager_2

It was universally agreed among CHC respondents that poor road infrastructure from their place of residence to CHCs was one reason for limited access to CHCs. Travel in the mountainous areas is particularly difficult in the wet season, when it can take up to several hours to reach a health facility during an emergency. Poor transportation leads to the fact that pregnant women are more likely to give birth at home or at traditional birth attendants' houses (United Nations, 2008). One manager in Sa Pa, a district which is 40 km away from the province centre, explained why women do not come to the CHC for childbirth:

"You know, from the village to the CHC is quite far and hard, especially in the rainy season. There is no road for motorbikes, so most people walk. So, women choose

home-based delivery. However, it is good that some of them call traditional birth attendants or health village workers. Others are still assisted by their husbands or mothers-in-law".

District level_Manager_18

This finding is consistent with the results of a previous study conducted in Cambodia that identified distance as a barrier to utilisation of maternal health services in rural areas (Matsuokaa et al., 2010).

The quantitative research results showed that less than 20% of women in Sa Pa and 5% of women in Bat Xat give birth at CHCs (Table 5.3, Chapter 5). Previous reports showed that more than 70% of poor women in mountainous areas give birth at home, which is 3.5 times higher than among women in the Delta regions. About half of the deliveries in mountainous areas are assisted by HWs (United Nations, 2008). Data (quantitative and qualitative) collected in this study is in line with this report. Statistical data from the Sa Pa DHC from January 2013 showed that the proportion of home-based delivery was as high as 70%, as shown in Table 5.4, Chapter 5.

While distance to the health facility was a perceived influence on utilisation of MH services by most respondents in Lao Cai province, a small-scale study conducted in the Quang Xuong district of Thanh Hoa, a province located 150 km south of Hanoi, Vietnam, did not find it to be such an influential factor (Duong et al., 2004). However, it appeared that women in Quang Xuong study had relatively easy access to a CHC compared to women in Lao Cai. For example, the average distance to a CHC for the home- and setting-based groups in Quang Xuong was 1.69 and 1.85 km, which is very different to Lao Cai where difficult and long journeys from households to health facilities are common.

In summary, the qualitative results in this study indicated that reported long distances to health facilities and difficult transportation in mountainous and disadvantaged areas are important causes of low utilisation of the MH services provided at the CHCs. This was perceived by many respondents as a difficulty in their work, as it affected HW morale and may erode their competencies over time. The detailed relationship between low service utilisation and the performance and motivation of HWs will be discussed later in Section 7.5.

7.2.2 Geographical conditions in Bac Giang province

In contrast to the Lao Cai situation, in Bac Giang, home deliveries are not common but the MH services in CHCs are also generally underutilised. The maternity utilisation described in Table 5.6 of Chapter 5 shows only 37.8% of women giving birth at CHCs in Lang Giang, with the percentage in Viet Yen and Yen Dung even lower, at less than 10%.

One respondent in Bac Giang shared:

"For 8 years we have not had any delivery cases. Since our CHC is near the district health centre and district hospital, women do not come to us. In our commune, about two thirds of women give birth at a district hospital and one third go to provincial or central hospitals.

Commune level_Staff_2

As discussed later in Section 7.6 of this chapter, low utilisation of services in CHCs results in low motivation of HWs and affects their performance.

The development of the socio-economic condition of the province, coupled with convenient transportation from communes to the district centre is considered to facilitate accessibility to the district and provincial hospitals. In contrast to Lao Cai districts, Bac Giang is located in a midland area, so the road infrastructure in districts and communes was described as flatter, and more convenient for travelling within locations and to the provincial centre.

"...With better economic conditions and more convenient transportation, fewer women come to CHCs for delivery. In average each CHC has only 3 deliveries".

Provincial_Administrator_3

"From our CHC to the district hospital, it is about 4km, so it is quite convenient. Those women who have insurance cards go directly to the higher level [district] to give birth".

Commune level_Manager_4

All things considered, the significance of underutilisation of maternity services is different between Lao Cai and Bac Giang. In Lao Cai, pregnant women hardly ever access CHCs due to difficult transportation, while in Bac Giang, women

basically prefer to bypass the CHC and give birth in the district hospital facilitated by more convenient transportation.

7.3 CLIENT EXPECTATIONS

The second contextual factor perceived by respondents in study locations as influencing HWs is client expectations. The term "client" used in this chapter refers to pregnant women who seek maternity services in a health facility. In this chapter, three aspects of client expectations will be discussed in detail: women's autonomy of choice, technological preferences and women's perceptions of service quality.

7.3.1 Women's autonomy of choice

Women have varying levels of autonomy to choose the setting for their birth influenced by geographic, economic, and socio-cultural determinants. According to respondents, having fewer children compared to the past, and being more knowledgeable about health have influenced women's decision about the choice of health facility.

"In my area, they seldom go to a CHC to deliver. In recent years, only a few women have come. There are months where nobody comes. The first reason is that they buy voluntary insurance, and the second thing is that they are more knowledgeable. Today, each family has only 1 or 2 children, so women choose the place for childbirth by themselves and do not wait to be referred by the CHC. In Lang Giang district [a district of Bac Giang], only women in the remote areas (more than 10 km away from here), deliver at the CHC".

Commune level_Staff_4

Several factors were perceived to influence the women's choice of health facility. First, as the result of many health education and promotion programs, women today are more knowledgeable regarding RH and MH (Graner, Mogren, Le, Krantz, & Klingberg-Allvin, 2010). In addition, many Vietnamese families nowadays have one child or two, so women are more conscious about taking care of themselves and their babies. They are also more aware of obstetric complications and, as a result, they care more about the quality of services provided at the health facility. Furthermore, they are more knowledgeable about the health facilities in which they can choose to give birth.

Second, today, more women join insurance schemes, either compulsory or voluntary types. Those women who have insurance can deliver at either CHCs or higher level facilities (e.g. district hospitals) and are reimbursed afterwards. The reimbursement after a delivery or provision of other health services is executed by a representative of the insurance company who is based at the hospital. However, no such person is available at CHCs so women who birth at CHCs have to go to the district hospital for reimbursement. It was reported that due to the complex system of reimbursement for delivery cases at CHCs, many women do not want to birth at CHCs.

"It is apparent that the reimbursement for a delivery case is very complex. It requires many steps and is time consuming. I have heard that. Therefore, they [women] prefer to go to the district hospital".

Provincial level _Administrator_3

7.3.2 Technology preferences

Almost all health managers and staff in both provinces mentioned improving socioeconomic conditions and the increasing level of client awareness as the main reasons women choose to birth at higher-level facilities in the health service system. Seeking technology-based diagnosis services, such as ultrasound, during the child-bearing period has become increasingly popular in Vietnam (Tran et al., 2011). Ultrasound examination can be seen as a component of ANC and is available in all hospitals and most private clinics. It was officially recommended for pregnant women in the 2009 National Guidelines, and was defined as an optional ANC service, when available (Vietnamese Ministry of Health, 2009). Almost all women in both urban and rural areas received an ultrasound examination during pregnancy.

Results of recent studies conducted in Vietnam showed that ultrasound was the ANC service that was used by most rural women (Tran, 2012; Tran et al., 2011) Almost all women had at least one ultrasound examination during their pregnancy. Ultrasound was offered during most ANC visits even though it is not a core content of ANC according to the national recommendations. The average number of scans per pregnancy reported in this study was 6.3, much higher than that reported in the United States of America (2.7 scans) and Canada (3.2 scans) but it is still lower than in a previous survey in Hanoi in 2006 (8.3 ANC visits) (Tran et al., 2011).

There is a concern that, driven by client expectation, HWs may pay more attention to advanced technology services than to core services. When asked about the services being provided in CHCs, HW respondents thought only of ultrasounds rather than other core services and claimed that the low utilisation of ANC services within CHCs was due to the lack of ultrasound services.

"They [women] come to the CHC for vaccination and pregnancy record. However, their need to use the ultrasound is very high and currently we could not meet it, so just a few come".

Commune level_Manager_4

"Nowadays, women like to have ultrasound and in the district level they are equipped with more medical equipment such as a foetal Doppler. As a result, antenatal care is rare in CHCs. If we were equipped with ultrasound and a foetal Doppler, we would definitely have more women coming for services".

Commune level _Staff_4

Other research indicated that the overuse of ultrasound examination is possibly due to the commercialisation of the Vietnamese health care system (Hanoi School of Public Health, 2012; Tran, 2012). Ultrasound techniques were first introduced into Vietnam in 1994 and only by 2006 was the development and availability of ultrasound apparent in Vietnam. This is consistent with the increase in the male-to-female sex ratio at birth (SRB) that has been seen since 2006 (Vietnamese General Statistic Office, 2012). An imbalance in the SRB has become an issue of public concern in Vietnam in the early 21st century. One important factor is **"**the social context of son preference is prevalent, particularly in the northern areas of Vietnam, where Confucian philosophy's influence is strongly apparent" (Hanoi School of Public Health, 2012). A son-preference culture combined with pressure to keep families small (to comply with population policy), encourages women and their families to seek sex determination services and sex selective abortion. Ultrasound services are provided in CHCs; however, they are not used for sex determination services because the ultrasound machines are usually not modern enough and HWs are not qualified (Hanoi School of Public Health, 2012).

This suggests that provision of contemporary technology such as ultrasound in CHCs needs to be considered in promoting the acceptability of CHCs for antenatal

and birthing services, especially when ultrasound has been recommended in ANC since 2009 by the National Guidelines on Reproductive Health. However, this would require a parallel consideration of HW competencies to effectively and safely use the technology and processes to ensure ongoing skills maintenance and quality control of operator performance. This should be within specific guidelines on using such technologies in order to avoid inappropriate and excessive use.

7.3.3 Women's perception of quality of services

The other factor affecting utilisation of MH services and hence lower HW motivation that was reported by respondents in the study locations is women's perceptions of the quality of MH services. Previous research has showed that the majority of women use maternity services at higher-level health facilities because of concerns about the quality of services offered at the grassroots level. For example, research conducted in Tanzania showed that perceived poor quality of care at the primary healthcare facilities was an important reason for bypassing such facilities (Kruk, Hermosilla, Larson, & Mbaruku, 2014). Likewise, a study conducted in a district of Thanh Hoa, Vietnam found that women's perception of quality of services and other socio-cultural factors contributed to the low rate of delivery service utilisation overall (Duong et al., 2004). According to the CHWs in this study, delivery services are seldom used in CHCs due to women's negative perceptions of the quality of services provided in CHCs. Reports from this study mirror the findings of Duong et al. (2004). Respondents in this study explained:

"Now with the high level of awareness, women go to a higher level to give birth and do not go to CHCs. I have worked here for eight years and since then I have not seen a delivery. Moreover, people are wealthier and they have fewer children compared to the past, so they want to go to higher levels to seek safe and quality services".

Commune level_Staff_2

"As they have not ever come to CHC to give birth, they would not know if health workers working there could perform well. They perhaps do not trust in health worker competencies".

Commune level_Manager_1

Respondents also emphasised that because they did not have patients, they found training less meaningful and effective since there would be no chance for them

to practice after training. Though the influence of low service utilisation on HW motivation was not explicitly expressed, it was considered to affect HWs, and perceived as a barrier to maintaining the skills of HWs in these areas.

"It affects us. Because we do not have patients, we cannot practice. We will forget our learnt skills".

Commune level_Staff_3

There are several reasons why clients choose higher-level facilities for delivery services. For instance, clients are more likely to trust HWs at the district hospital than at the commune level. CHWs recognised the issues, stating, for example:

"…patients seek more a trustworthy address. That [the quality of service in CHC] is one of the patients' concerns. Quite a few of them bypass us to go to higher levels. In fact, health workers should be specialised and appropriately and professionally trained".

Commune level _Manager_3

This finding is consistent with result of a previous study conducted in four mountainous districts of Vietnam indicating that due to poor infrastructure and the lack of essential drugs in CHCs, clients there did not see the benefit of delivering at a CHC (UNFPA/PATH, 2006).

Second, many respondents acknowledged that the constraints of the technical assignment set for CHCs by the MOH partially limited the provision of services in CHCs. For example, at the CHCs that have medical doctors, there is a limitation on services and drugs that can be used in the treatment of patients. As a result, CHWs sometimes faced a situation in which they knew how to treat patients but they could not actually do so because of the restrictions, and hence they had to refer patients to higher levels. To some extent, this was considered as a barrier for medical doctors who wish to undertake service improvement and it also affected client trust in the quality services provided.

Third, the existing health insurance payment scheme (as introduced in Chapter 1) that imposes a ceiling on reimbursement at district hospitals and CHCs, creates the perception that the lower levels could not provide comprehensive health services. It is acknowledged that district hospitals can provide adequate accommodation, including a post delivery room, where women can enjoy some peace (United Nations

Population Fund, 2008a) but CHCs cannot do this. From the perspective of service quality, higher-level facilities have the advantage of more qualified HWs, better infrastructure and medical equipment and therefore are more attractive to clients and patients. A previous study in Tanzania confirmed the association between the availability of qualified HWs and the number of qualified EOC facilities, suggesting an increased likelihood that pregnant women choose facilities with qualified personnel (Olsen et al., 2005). These factors will be further discussed in Chapter 9, Organisational Factors.

7.4 ETHNICITY

Ethnicity was perceived by most respondents in Lao Cai province as a major cause of low utilisation of MH services. Ethnicity has been considered to influence beliefs, norms and values in relation to childbirth and hence is a salient factor in of maternity service use and women's status (Gabrysch & Campbell, 2009). While not all studies report access differences to maternity services by ethnic or cultural group, many studies have found that ethnic and cultural minorities are less likely to receive skilled care. This has been reported in indigenous women in Latin America, ethnic minorities in China and Vietnam, Kurds in Turkey, tribes in India and non-whites in South Africa (Gabrysch & Campbell, 2009; United Nations, 2008).

The factors related to ethnicity are relevant in Lao Cai, the northern mountainous province of Vietnam, where most of the population belong to ethnic groups. These factors do not apply strongly in Bac Giang province as its population is homogenous. The largest ethnic groups in Lao Cai are the H'Mong, Dao, Ha Nhi and Tay. Ethnic minority groups tend to live in mountainous and remote areas. These areas are less developed especially in transportation and infrastructure, limiting accessibility and hence utilisation of health care services (United Nations, 2008).

In common with other mountainous provinces such as Hoa Binh and Ha Giang, women in Lao Cai were reported by respondents in this study to rarely use CHCs services and only if things went wrong. The H'Mong in particular seemed to be extremely reluctant to utilise public health facilities for delivery.

"The proportion of women birthing at CHCs in the high mountain area is very low. Only Tay, Dao and Kinh people go to CHCs for delivery service, nearly 100%. Other ethnics such as Ha Nhi, H'Mong people, rarely come, unless it is an emergency or complication".

Commune level _Staff_1, District level _Manager_2

A previous study found that ethnicity has a strong influence on a woman's decision about delivery location (Sepehri et al., 2008). Two relevant aspects related to ethnicity, including the culture of ethnic people, their beliefs and customs related to childbirth and language barriers, will be discussed in this section.

7.4.1 Culture of ethnic people

Vietnamese society has been strongly influenced by Confucianism for a long time (Graner et al., 2010). Particularly for the H'Mong people, community attitudes are influenced by strong beliefs in patriarchy and Confucianism that have existed for thousands of years, and this undermines policy and guidelines on RH (United Nations Population Fund, 2008b). Culturally, a H'Mong woman is supposed to be inferior to a man, so she must oblige her husband and is not empowered to plan either the timing of birth or the number of children in the family. Respondents reported that due to their culture, the decision to seek MH services might be influenced by the family hierarchy where decision making involves more members of the family, notably the husband.

"And the H'Mong are very backward. The husband (or husband's family) does not allow a stranger to touch his wife or see her during her delivery. So he or his mother assists his wife. They only come to seek CHWs in case of complication".

District level _ Manager_1

Not only affected by culture, the low utilisation of maternity services is also influenced by the beliefs that having a baby is a normal process, and hence women and their families feel no need to deliver anywhere but home (UNFPA/PATH, 2006), and do not require professional medical assistance (United Nations, 2008; United Nations Population Fund, 2007a). The low usage of maternity services at CHCs can also be explained by a local custom whereby the pregnant woman is taken care of at home instead of going to a health facility (United Nations Population Fund, 2007b). In addition, the low rate of public facility delivery is common because many communities do not see any advantage to delivering at a public health facility, with women preferring the comfort and support of family and traditional birth attendants (United Nations Population Fund, 2007b). However, some CHWs in Lao Cai could

see no clear reason why ethnic women do not come to use maternity services in CHCs.

"Not many women come for ANC. They might be shy, or they might think it is not necessary, or they just do not know that it is necessary. So only a few come".

Commune level _Manager_1

There seems to be no compelling reason to argue that shyness at the prospect of being examined by a male healthcare provider is an explanation for the low rate of pre-natal health checks (United Nations Population Fund, 2007b). Research conducted in Ha Giang, a mountainous province of Vietnam, close to Lao Cai, found that H'Mong women were willing to visit the health centre for the fitting of an intrauterine device (IUD) by a male assistant doctor. It was also found that some of the deliveries at home had been assisted by male village HWs (United Nations Population Fund, 2007b). Nonetheless, one study conducted in some districts of Hoa Binh and Ha Giang provinces reported that "shyness" was confirmed by some of the respondents as the reason for the high rate of home-based delivery by H'Mong people (UNFPA/PATH, 2006).

The data yielded by this study suggested that pregnant women from some ethnic groups felt embarrassed by being pregnant and therefore often resisted telling anyone about their situation. One midwife in Lao Cai shared her experience when she worked in a community providing antenatal care.

"... They are so shy. There were times when I came to their place to provide a prenatal check. When touching a woman's belly, I was certain she was pregnant but she insisted that she was fat, and not having a baby. It was so difficult to work with the community. They do not have much knowledge".

Commune level _Staff_3

In addition, they were also embarrassed in the presence of a stranger during delivery, particularly a male worker, and this discouraged ethnic women from seeking assistance from male HWs.

"Ha Nhi people accept female HWs only. I remember one head of CHC said that a woman came to CHC to give birth. She left straight away after seeing a male HW, and she gave birth on the way home".

District level _ Manager_1, District level _Manager_18

There is a likelihood that the culture and beliefs of ethnic groups strongly influences the behavior of clients and their use of maternity services. It is evident that due to the culture and customs of ethnic people, not many women come to use the services provided at the CHCs. As a result, for CHWs, it seemed very difficult to accomplish their tasks in MH areas. For example, they could never achieve the set targets of a proportion of women having more than three antenatal care episodes, or women birthing with the assistance of skilled birth attendants. This was considered by many respondents to lower the morale and motivation of HWs. More details of the relationship between low utilisation of services and HW motivation, competencies and performance will be further discussed in Section 7.5.

7.4.2 Language barriers and lack of information

Lack of information regarding MH and difficulty in communication were considered by HWs as barriers to the accessibility to MH services provided at the CHCs. Many communities are not adequately informed about available services. As a result, pregnant women in rural and mountainous areas lack information about normal delivery as well as signs of an abnormal pregnancy. They receive little or no information about how to prepare for a delivery, and have little idea about where to seek support if there is a problem (United Nations, 2008; United Nations Population Fund, 2008b)**.**

Lack of knowledge contributes to ethnic women either treating themselves or going untreated, and seeking help only in emergencies, when it is often too late (United Nations, 2008; United Nations Population Fund, 2008b). The finding of this study is consistent with what has been stated in previous studies. For example, a midwife working at a CHC shared:

"*Last year in my CHC only 4 out of 41 pregnant women gave birth at the CHC, a similar number went to the district hospital or regional clinics. The rest, about 30 women, delivered at home. They do not go to the CHC unless they have a complication".*

Commune level_Staff_1

Language barriers may be another cause. CHWs in mountainous areas reported difficulty in communicating with ethnic pregnant women since most of the ethnic

women do not speak the Kinh language. The communication between HWs and women took place mostly through their husbands or by locals who could speak an ethnic language.

"In my area only husbands speak Kinh language. Only a few women understand Kinh. My CHC is near the Commune People's Council so some staff there can come to the CHC and help us to translate in case of need. However it is difficult for us to advise them or consult them through translation".

Commune level_Staff_1

Language difference has been explicitly identified as one obstacle for HWs to implement the health communication and education program for pregnant women.

"So hard, because it relates to population literacy. Most of them do not speak Kinh language, and just speak ethnic languages when coming to the CHC".

Commune level_Manager_1

According to many respondents, since women did not come to a CHC, HWs had to reach the pregnant women at their residence. District health centres often had one mobile team to monitor communes twice a year for health programs such as gynaecological examination and extended vaccination programs.

"Only a few women came here for ANC. They rarely come to the CHC. We always have to go to the village. When implementing the extended vaccination program, we give pregnant women tetanus vaccinations and ask them to come to the village centre for health checks. Otherwise they do not come to us, or just a few of them. Just some people who are aware of the benefits come".

"Our job is to communicate with them and persuade them, help them to understand and use ANC and delivery services at CHC, just that".

Commune level_Staff_3, Commune level_Staff_1

In summary, there are many challenges for the MH workforce in mountainous areas where the majority of the population belong to ethnic groups. It is generally understood that the interaction of HWs and clients influences the motivation and performance of HWs (Chandler et al., 2009). In mountainous districts, the difficult communication with ethnic clients as a result of language barriers was evidently a performance obstacle.

7.5 SUMMARY OF DETERMINANTS OF LOW UTILISATION OF MATERNITY SERVICES IN TWO PROVINCES

Maternity service utilisation was low in both provinces but the determinants were different. In Lao Cai, difficult transport (long distance and bumpy roads) and ethnicity were important determinants. Several hours of travel along difficult roads to a health facility was reported as a barrier to accessibility to MH services. Moreover, traditional customs and beliefs of ethnic groups also have an impact on their health service seeking behaviour. All these issues contribute to low usage of maternity services in CHCs in Lao Cai province.

Unlike Lao Cai, women in Bac Giang basically bypass CHCs to seek maternity services at higher-level health facilities (district hospitals) which are better equipped and have more qualified staff. Low utilisation of maternity services in CHCs in Bac Giang is influenced by the client's expectations that care should involve technology. As a result of increasing socioeconomic status, women are more knowledgeable and demanding of specific care, and hence are more likely to actively choose health facilities. Convenient transportation was considered to facilitate accessibility to the district hospital and higher-level health facilities.

7.6 HOW DO CONTEXTUAL FACTORS AFFECT MOTIVATION AND COMPETENCIES OF HEALTH WORKERS?

Sections 7.1 to 7.4 have shown that contextual factors are important determinants of service utilisation. This section will analyse the relationship between service utilisation, practice opportunity, and HW motivation and performance. Opinions shared by respondents during the interviews implied that contextual factors have a fundamental relationship with HW motivation and competencies. This relationship is depicted in Figure 7.1.

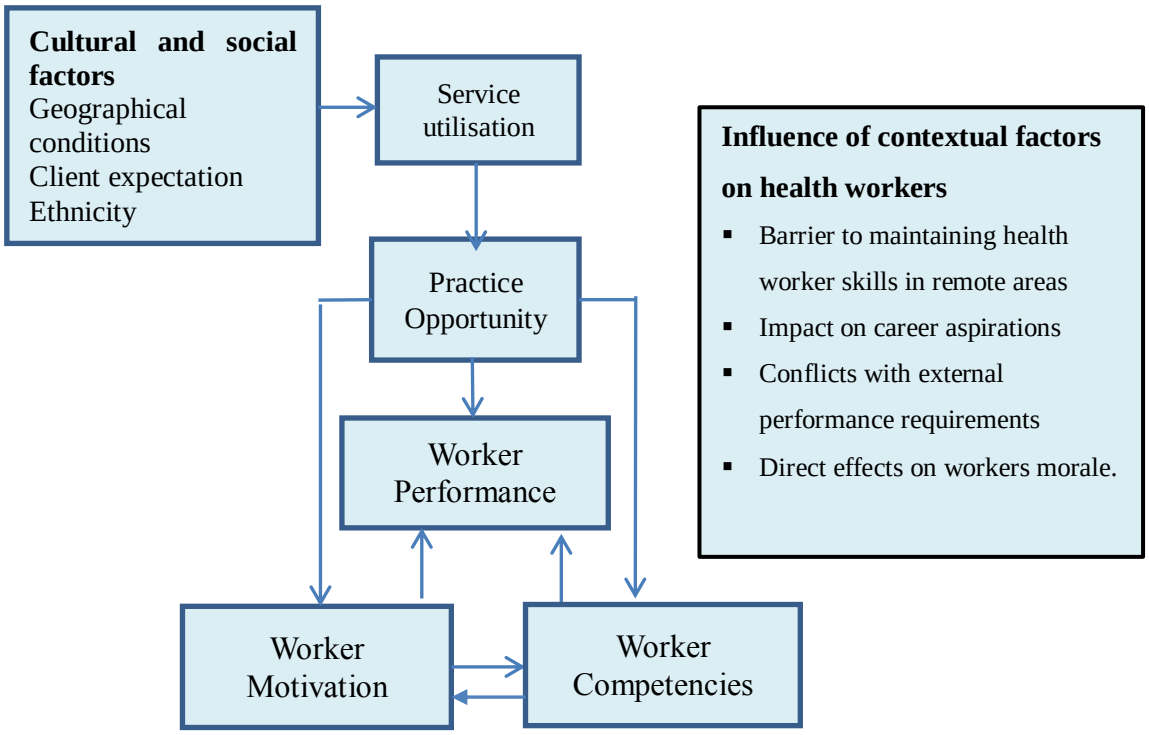


Figure 7.1 Relationship between service utilisation, HW competencies, motivation and performance

7.6.1 How does low utilisation affect health worker competencies?

As described previously, the low utilisation of maternity services in CHCs seemed to be common issues in both provinces, even though the reasons varied. Respondents pointed out that subsequent to their training they had little opportunity to practice skills learned since patients did not come.

"To be honest, with this qualification, I will not have the chance to use all the knowledge I have learnt. In the long run, my competencies might be eroded. I need to have opportunity to practice".

Commune level _Manager_1

"For those that graduate from medical school but do not practice, it affects their skill maintenance. All HWs keep saying that there is nothing they can do after training".

District level_Manager_16

First, little opportunity for HWs to practice their skills makes them feel less confident when dealing with complex situations. Their ability and willingness to manage actual or potential clinical issues therefore is affected. CHWs seem to increasingly respond in a similar way to manage complex situations, by referring patients to a higher level, which was reported as the most common reaction.

"When pregnant women come I would refer them to a higher level if I found it [delivery] hard to manage. In easy and normal cases, well, they rarely come to CHC because they can deliver at home.

Commune level _Staff_3

Second, because only a limited number of clients come to use delivery services means that HWs have little practice. Respondents stated that this influenced HW experiences of difficult situations and ultimately had an impact on HW competencies and the quality of services they provide.

"After training, HWs can perform very well. But because patients rarely come, they do not practice frequently, so they forget".

Provincial level_Administrator_3

In response to the low service demand, HWs are less prepared when the need arises. Workers are less likely to follow the regulated standard routines and procedures, such as maintenance of medicines and medical equipment, and preparatory sterilisation of instruments.

"When women come to the CHC for delivery, they [HWs] *are very worried and confused. Since they do not practice frequently, their experience is limited. The instruments are supposed to be sterilised everyday (according to the NG for RH) but sometimes they are not, as they think women will not come to use the services".*

Provincial level_Administrator_3

7.6.2 How does low utilisation affect health worker motivation?

It can be argued that less opportunity to practice resulting from low utilisation of services affects HW motivation in at least three ways. First, in this study low utilisation was perceived as a barrier to maintaining HW skills. It also was seen to have an impact on career aspirations. HWs did not see a career pathway in long-term employment at CHCs where there were not many women coming to seek maternity services. Health workers, therefore tended to move to district health facilities to work, where there are more patients and they can practice what they have studied.

"They [health workers] like to work in those districts that have enough medical equipment, so that they can improve their competency. Those districts that often refer patients to the provincial level, HWs do not like to work there".

Provincial level_Administrator_4

Second, low utilisation conflicts with external performance requirements, and therefore the potential to be seen to be unsuccessful. Many respondents from Lao Cai province expressed the opinion that the targets set for maternity services in CHCs were an "impossible mission". This perception could have had an impact on HW motivation which was defined as "an individual's degree of willingness to exert and maintain an effort towards organisational goals" (Franco et al., 2002).

"They do not even come for prenatal checks. No, they do not come. The only way to access them is to go to their place and find them; otherwise they never come to look for us. Now the target for ANC that has to be met is that 70-80% of pregnant women should have prenatal checks at the CHC, but it can never be done if they will not come".

Commune level _Staff_1

Work motivation, according to Franco et al. (2004) exists when there is alignment between individual and organisational goals, and when achievement of organisational goals is associated with personally desired outcomes, such as a sense of achievement or personal gain. In the study provinces, health workers working at a CHC, especially in scattered mountainous areas, often feel they are poor performers in health communication and education programs.

"We communicated the benefits of maternity services, but if they do not come we cannot help them".

Commune level _Manager_1

The situation described apparently affects the self-efficacy and self-concept components of individual motivation (Franco et al., 2002; Kak et al., 2001).
Another respondent shared that the utilisation of MH services may depend on women's knowledge and whether they come to a CHC or not. Although CHWs have implemented communication programs, women might not come because of their ethnic culture and customs. In such cases, HWs were unable to help when these women gave birth at home or needed some assistance. Previous research found that due to the culture of son-preference, many women having a third child were more likely to feel embarrassed about coming to public health facilities. Therefore, instead of going to CHCs, they went to a private clinic (Graner et al., 2010).

Third, low utilisation has a direct effect on staff morale. For example, a respondent in Lao Cai reported:

"Last year, one nurse in charge of the RH program requested retirement. For a long time her CHC had not met the set criteria for RH and therefore she felt bored. She shared in a personal talk that she was not competent enough for the job and that was the reason she wanted to quit".

District level _Manager_1

In the long run, HWs working in mountainous areas will be at the greatest disadvantage. Some of them might be well trained but after years working in the highland areas, with little practice, their knowledge will be eroded. This also has the potential to affect morale and their career aspirations.

The results of qualitative data collected from this research confirmed framework proposals regarding factors related to communities. The contextual factors, including geographical conditions, client expectations and ethnicity, influenced HWs, though the effect was not direct but through the intermediate factor, service utilisation. It is evident that HW characteristics (including HW competencies, motivation and performance) and service utilisation interconnected and it was hard to distinguish the cause from the effect. From a service quality perspective, an inadequately competent, unskilled or a demotivated workforce was the main reason for low service utilisation. However, from a different perspective, human resource management, little opportunity to practice (caused by poor patient flow and low utilisation) had a critical impact on HW competencies, motivation and performance.

7.7 SUMMARY

This chapter has described the complex relationship between contextual factors in the client population and HW competencies, motivation and performance. While the relationships were broadly similar in the two study locations, the nature and importance of the factors varied. A key common element is that factors that led to reduced utilisation of community health centres had direct and indirect effects on the motivation and performance of the health workforce. Without specific organisational change, this has the potential to spiral downwards, where reduced utilisation leads to reduced skill sets of the health workforce and reduced willingness to provide the necessary services. This in turn reinforces the clients' view that CHCs are not safe or desirable places to birth.

This chapter has provided examples of respondent's perceptions of the influence of contextual factors on HW competencies, motivation, and performance.

The next chapter will examine how other external factors, such as governance framework, impact on the health workforce.

Chapter 8: Governance framework

8.1 INTRODUCTION

From the conceptual framework, the factors that were proposed to be important in determining health worker (HW) competencies, motivation and performance included health-related policies (governance framework). As discussed in Chapter 3, health policies and governance framework are external factors that feed into organisational factors (discussed in Chapter 9), which in turn contribute to the individual level factors discussed in Chapter 6. From a health system perspective, central government agendas such as decentralisation and health reforms also influence the regulation and deployment of human resources for health (HRH) at all levels of the health system including local systems in which individual health workers work (Parkhurst et al., 2005). It is generally understood that HRH are characterised by a complex network of influential factors and their interaction. Therefore, the governance framework also affects motivation, competencies and performance of HWs through organisational processes. The impact of governance factors on organisational factors can be seen by the degree of overlap in the discussion about the organisation of the district health system (which mainly focuses on the quality of supervision provided to CHCs) and HRM practices in the next two chapters.

This chapter describes the specific routes whereby the governance framework in Vietnam influences HW competencies, motivation, and performance. Section 8.2 will introduce the organisational structure of the district health system and the implementation of relevant policies in two provinces. Section 8.3 will analyse the influence of the governance framework on maternal health (MH) services, with the first part focussing on the perspective of district managers and staff, and the second part focussing on the view of CHWs on issues related to governance. This is followed by Section 8.4, which discusses its impact on HRM at the district and commune levels. This chapter combines qualitative data and documentary analysis, and integrates survey results where relevant.

8.2 THE DISTRICT HEALTH SYSTEM STRUCTURE

In the past, only district health centres with curative and preventive functions were responsible for all health issues in a district. The issuing of Decree 171 and 172 (Vietnamese Government, 2004) and then a number of circulars in 2008 (Vietnamese Ministry of Health, 2008; Vietnamese Ministry of Health and Ministry of Internal Affairs, 2008a, 2008b) brought substantial change to the organisation of district health services.

After 2008 when Circular 03/2008/TT-BNV took effect, all commune health centres (CHCs) in Bac Giang were transferred to the Provincial Health Department (PHD) and brought under the direct supervision of the District Health Centre (DHC). However, Lao Cai is one of the few provinces in Vietnam where the District Health Bureau (DHB) continues to play a role as the "main" supervisor of CHCs. The District Health Bureau manages the CHC personnel and pays their salaries. The DHB unit is under the control of the District People's Committee (DPC) so currently CHCs remain under the supervision of the local administrative authority and not the PHD. This organisational arrangement complicates the management of CHCs as district health units have different administrating authorities.

Table 8.1 summarises the changes in the district health organisation in the two provinces as a result of policy changes and local policy interpretation. The resulting differences between the provinces in terms of district health organisation include:

- Administration of CHCs in Bac Giang by the DHC, but by the DHB in Lao Cai
- Governance of the District Centre for Population and Family planning (CPFP) in Bac Giang by the DPC while remaining under the Provincial Office of Population and Family planning (POPFP) in Lao Cai. In Bac Giang, the CHWs in charge of population and family planning work in the Commune People's Committee (CPC). However, these HWs in Lao Cai still work at CHCs but are under the technical supervision of the District Centre for Population and Family Planning.

In this section, two terms describe the types of supervision that CHCs receive from the district level: technical supervision and administrative supervision. Technical supervision refers to technical aspects of service provision such as examination and treatment procedures, regulation of prescriptions or antenatal care

procedures. Administrative supervision, on the other hand, refers to direction, organisational management, payroll, and operations.

Table 8.1 Timeline of related policies and interpretation taken by provinces

Year	Issuance of related policies	The interpretation in provinces with relevant time	
		Bac Giang	**Lao Cai**
2004	Decrees 171 and 172, dated 29/4/2004 and issued by the Government regulated the responsibilities and organisation of the District Health Bureau (governed by the District People's Committee).		
2005-2006		The establishment of the District Health Bureau in Bac Giang (2005) and in Lao Cai (2006)	
2006-2007		The division of the District Health Centres into District Hospitals and District Preventive Medicine Centres in Bac Giang (2006) and in Lao Cai (2007)	
2008		Until 2008 in both provinces, CHCs were under the administrative supervision of the District Health Bureau and technical supervision of the District Hospital and District Preventive Medicine Centre.	
2008	Joint Circular 03/2008/TT-BYT-BNV dated 25/4/2008 was issued in which one article regulated that all CHCs should be under the supervision of the Provincial Health Department		
2012		1/2012: All CHCs were transferred to Provincial Health and came directly under the supervision of the District Preventive Medicine Centre. 6/2012: The District Preventive Medicine Centre was renamed the District Health Centre.	After this Circular, in Lao Cai, CHCs remained under the supervision of the District Health Bureau and the District People's Committee
2008	Circular 05/2008/TT-BYT dated 14/5/2008 regulated the responsibilities and organisation of the Provincial Office of Population and Family Planning, and the district centre of Population and Family Planning that reports to this provincial Office.		
2008		Establishment of the District Centre of Population and Family Planning	
2013		8/2013: All district Centres of Population and Family Planning were transferred to and managed by the District People Committee, but	There has been no change in district health organisation since the issuance of this Circular.

		remained under the technical supervision of Provincial Office of Population and Family Planning.	

***Note:** A Decree is a legal document issued by the Prime Minister or the Government. A Circular is issued by one ministry whereas a Joint Circular is issued by more than two ministries.*

The difference between the two provinces in terms of district health organisation is illustrated in Figures 8.1 and 8.2.

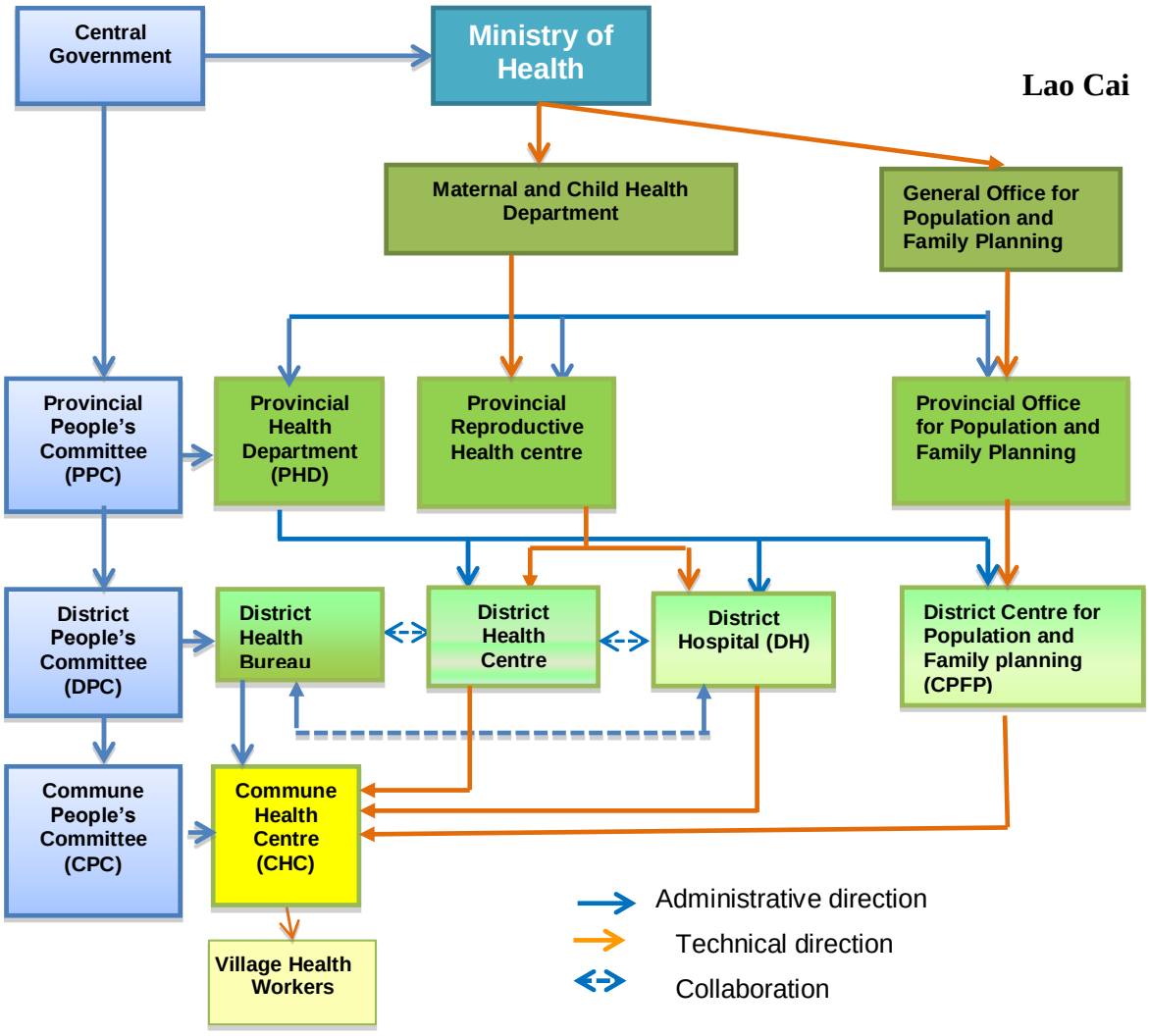


Figure 8.1 Organisation of the maternal health system in Lao Cai

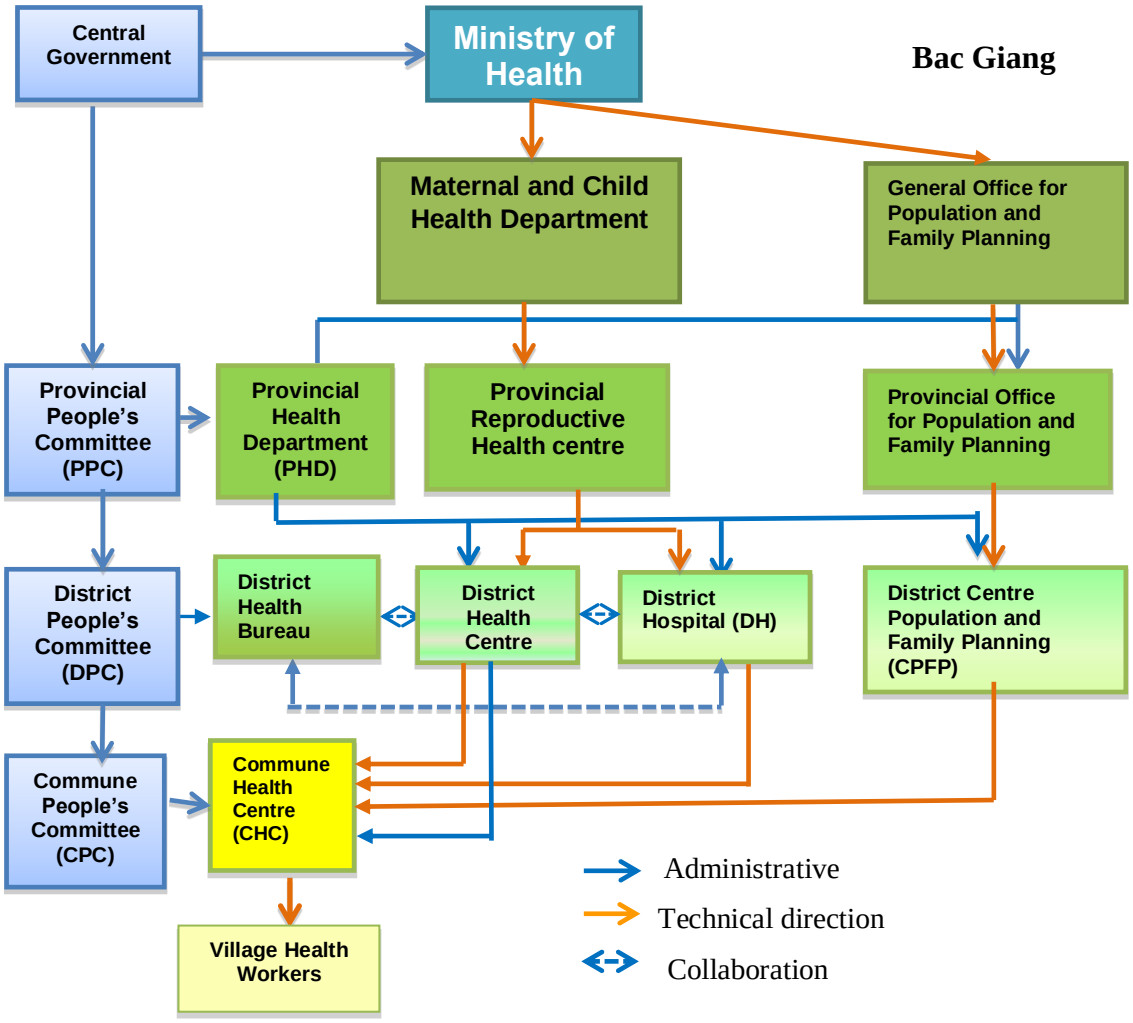


Figure 8.2 Organisation of the maternal health system in Bac Giang

In general, the current models of district health organisation in both provinces were reported to have some advantages and disadvantages. These will be discussed in detail in the next section.

8.2.1 Advantages of the current district health organisation model

Some respondents reported that the advantage of the district health structure described in Figures 8.1 and 8.2 was the strengthening of capacity in specific areas, such as the preventive medicine sector, and therefore increasing the capacity of the health system in regard to meeting population demand.

"In the past, district health was centralised at one point, it had both advantages and disadvantages. Now, the preventive medicine centre has split from the former district

health centre. The advantage is to develop the preventive medicine sector, but the collaboration between the district hospital and the district health centre is difficult".

District level_Manager_14

The curative sector was also strengthened with district facilities now having the ability to develop to address local needs. As stated by another district manager:

"In the past we had a very nice model of district health, but it just met the needs of some of the population. Our hospital at that time had only 75 beds, but when we separated from the centre [District Health Centre], we developed to 125 beds. Now, in order to meet the need, we have developed to 150 beds and are definitely providing better services".

District level _Manager_3

8.2.2 Disadvantages of the current district health organisation model

Despite having some advantages, the current organisation was more commonly reported to have several disadvantages. These included 1) waste of human resources and 2) unclear responsibilities of district health units in supervisory roles over CHCs.

8.2.2.1. Waste of human resources

The current organisation of district health, split into four or five units has the potential to exacerbate the existing issue of shortages of qualified HWs. According to government documents instructing the organisation of district health, each district health unit should have at least one director and one or two deputy directors who usually have the highest qualifications amongst HWs in the centre. For example, the newly established centres, such as the Centre for Population and Family Planning, had about 6-7 HWs and among them, one was the centre director and one was an accountant. Therefore, from the perspective of the governance of human resources, the separation of district health functions unintentionally weakened the capacity of the district health system as an increasing proportion of the better clinically qualified and competent HWs had to take management roles. Those same people were then criticised for their lack of management background and skills (Vietnamese Ministry of Health and Health Partnership Group, 2009) while the district health system could not recruit new qualified HWs to replace them. However, this practice has not been restricted to Vietnam. In developing countries, district health managers have often

been found to be particularly weak in system management and monitoring activities (Fritzen, 2007).

One manager in the study locations expressed his point of view:

"The HRH of the district level is very limited, especially in the high mountainous areas. Splitting the former District Health Centre into different health units required the promotion of many HWs to managerial positions. The consequence is that we lack people who can conduct clinical work, it is just a waste of resources".

District level _Manager_12

It is evident that those people who take managerial roles will have less time to practise clinical skills, so their competencies may erode over time, while they have to struggle to run their organisation with limited experience in management. For example, several district managers stated that they were unable to evaluate their worker performance due to a lack of human resource management skills. From the perspective of human resource management, it seemed that these managers were dissatisfied with their current management roles, and on the other hand, they could not contribute much to the clinical tasks that their qualifications had trained them for. It was claimed that the health system had been gradually losing the 'good clinical performers' in exchange for "ineffective managers", and that their management skills certainly impacted upon many other HWs working in the system.

8.2.2.2. Issues with unclear responsibilities of district health units

It was reported that the division of district health services into four units caused disconnection between the different functions of the health system and caused confusion for CHCs (United Nations Development Programme, 2010). As mentioned earlier, the DHB was established to supervise the personnel and administrative processes of CHCs. The DHC supervises CHCs in the implementation of vertical programs and the DH supervises CHCs in examination and treatment, including health insurance for insured patients. This part of the chapter will discuss the responsibilities of each district health unit (DHB, DH and DHC) as a supervisor over CHCs and their actual practices in this role.

Issues with administrative management responsibilities of the District Health Bureau (DHB)

The first important point was the role of the DHB in the district health system. In both study locations the role of the DHB was understood differently by respondents. As regulated in the Joint Circular 03/2008/TT-BYT-BNV, CHCs were supposed to be under the management of the DHC; however, this was not the case in Lao Cai province. Therefore, the DHB in Lao Cai had to be responsible for overall health issues within the district and manage CHCs. Respondents working in the DHB thought that their function at a district level was similar to the function of the PHD at the provincial level, which is to manage all health-related activities in the area.

"The District Health Bureau, if understood correctly, is the unit that manages all health activities in the district, not only CHCs. But we do not have enough personnel and budget so our voice is not appreciated. This is really a problem in the health sector".

District level _Manager_2

By contrast, other respondents from the DHs and DHCs viewed DHB as an administrative unit that did not implement any specific health program, and whose main function was to assist the DPC and manage medical private practice within the district.

"...they [DHB] are only one department under the DPC with the function to provide advice to the DPC on health issues in the district. However, they overplay their role, so it is sometimes very bad".

District level _Manager_12

In fact, with the current limited number of staff working in the DHB, respondents reported that they could not perform all the required functions. This was consistent with the views of a provincial level respondent.

"The DHB cannot even visit CHCs once a year because they have only five HWs. Only HWs working at the DH and DHC go to CHCs. So being in charge of state administration requires them [DHB] to monitor and inspect CHCs frequently, but they actually cannot go to CHCs even once a year".

Provincial level _Administrator_2

The DHB was established as the result of district health reform in 2004 (explained in Section 8.1). Although the functions of the DHB were determined, an

insufficient number of staff and a limited operational budget meant they could not perform their assigned tasks properly.

Conversely, in Bac Giang, although respondents were aware of "the functions of the DHB that include providing advice for DPC and giving direction to DH and DHC", they expressed that the DHB's role was unclear and unnecessary. When asked about the DHB's function, the interviewees were not clear about which bodies were under the management of the DHB. There was a debate amongst HWs on the role of the DHB in supervising CHCs Bac Giang, where all CHCs were under the supervision of the DHC. There were even some doubts about the DHB's role in the administrative management of health.

"I think if we compare with the past, the role of the DHB is not so necessary. They should let leaders of the DH and DHC report directly to the DPC. At present, DHB's function is only to assist the DPC, but it makes its too twisty, and eventually HWs in the DH and DHC are the people who handle the work".

District level _Manager_14

To some extent, there was a contradiction between the responsibilities given to the DHB and their actual capacity. Many respondents, including the DHB staff, claimed that the DHB did not have enough resources to perform their tasks effectively. There was a common acknowledgement that with the given resources, the DHB could hardly handle their tasks as a unit to manage CHCs and/or manage health issues in a district. In fact, the number of HWs working in the DHB varied by district, around 4-6 people on average. Some DHBs even had only three people, meaning one head, one vice head and one staff member. In Lao Cai particularly, though the DHB still took responsibility for managing CHCs, it seemed they were not provided with support in terms of personnel and budget in order to fulfil their responsibilities. Consequently, DHB staff often felt unsupported. This situation not only affected their motivation, but also affected their performance supervisors over CHCs, which in turn affected the motivation and performance of HWs at the commune level.

The responsibilities of other district health units

Before 2004, the former District Health Centre was designated as the sole unified public health unit for both preventive and curative missions at the district

level (USAID, 2009) and was responsible for CHC management. Since the reforms in 2004, the District Hospitals, District Health Bureau and District Preventive Health Centres have been managed separately, as covered in Section 8.1. Witter et al. (2011) noted that "this has reduced the supervision of the CHCs, which falls entirely on the district health centre now (without the support of HWs working at the hospital, for example)".

It was reported that the district health units were assigned to supervise CHCs but actually, the responsibilities and functions were not specified. Supervision therefore overlapped in some cases, and was frequently implemented incorrectly. For example, the DH may have had the responsibility to support the CHCs in treatment and examination, but in practice they supported the assistant doctor who performed examinations in the CHCs but not the midwife in charge of MH, since this area was supposed to be supervised by the DHC.

Meanwhile, the supervision of MH workers was assigned to DHC's HWs who were mostly secondary midwives and who infrequently practiced MH skills at their workplace. Given the fact that a limited number of DHC's HWs now had to provide supervision for 15-20 communes, the support for CHCs was spread thinly. Moreover, there were two main issues related to the supervision of maternal health services in CHCs. The first one was the qualifications of the HWs who had supervisory roles. For example, some respondents in Bac Giang expressed their concern that many HWs working in the RH Department of the DHC had lower qualifications than CHWs, since almost all heads of CHCs in Bac Giang were upgraded medical doctors practicing every day. Second, supervisors in Lao Cai were mostly secondary midwives, or HWs with no obstetric expertise they had little or no practical experience in RH and MH areas. This resulted in HWs feeling as though they lacked confidence in their supervisory role. HWs in DHCs felt similar, stating that they could not give feedback on clinical issues raised by CHWs. Respondents reported that this led to the demotivation of the health workforce. This finding was consistent with the result of a systematic review on motivation and retention of HWs in developing countries (Willis-Shattuck et al., 2008). One observation that deserves discussion here is that HWs in DHCs could hardly provide effective and supportive supervision of CHCs with their limited competencies.

"Our health workforce does not have obstetrics expertise so they need some short

training courses on RH areas; however it is not as good as those who have obstetrics expertise. Therefore, we have problems with supervision. They are at the district level and responsible to direct CHCs. If they have expertise, the technical supervision for CHCs must be better".

Provincial level _Administrator_3

Compared to HWs in DHC's, those working at the Obstetric Department of the DH often had more experience in MH since they had more chance to practice. As a result, MH workers at CHCs had an expectation that they would be supervised by the DH.

"It would be better if the Obstetric Department of District Hospital supervises us; the DHC can remain our supervisor, but we need to have additional supervision from the DH".

Commune level _Staff_4

This situation again affected the morale of HWs in a supervisory role at DHCs since they were put in a difficult position and did not have appropriate competencies. There was a common consensus among respondents that with limited competencies, many DHC HWs were not able to direct CHCs in the MH area. This also influenced the motivation and performance of CHWs, who often felt dissatisfied with the supervision they were receiving. The topic of supervision will be discussed further in Section 9.1 of Chapter 9.

In summary, three district health units were described as three separate units with each of them focusing on a different issue. The gap in the management of MH service delivery was clear, relating to the supervision of MH service delivery provided at the CHCs. The management of health services delivery at the CHCs requires integration between administrative and technical supervision, and between direction of the curative and preventive medicine areas. The next section will discuss the collaboration between the three district health units in supervising CHCs.

8.3 GOVERNANCE-RELATED FACTORS IN RELATION TO THE ORGANISATION OF MATERNAL HEALTH SERVICE DELIVERY

As introduced in Section 8.1, like other provinces in Vietnam, Bac Giang and Lao Cai there was a restructuring of district health organisation in 2004. In the previous model there was only one District Health Centre (DHC) taking

responsibility for both curative and preventive areas. Since 2004, this centre has been split into the District Hospital and the District Health Preventive Medicine Centre (which was later renamed the District Health Centre). Additionally, the establishment of the DHB assigned to supervise the CHCs within the district has made district health organisation more complex, with many health units operating separately. All district health units have a supervisory role but are on the same level in the district health system in terms of power. This section discusses the difficulties in collaborating with other units and in the managing of CHCs identified by district level respondents. It also outlines the difficulties experienced by commune level respondents in performing their assigned tasks.

8.3.1 Perspective of HWs from the district level on current organisation of district health

8.3.1.1. Issues with collaboration between three district health units

Cooperation amongst district health units is very difficult resulting in the ineffective implementation of programs within districts (United Nations Development Programme, 2010). The health service delivery requires close collaboration between district health units. However, the communication processes between units has been described as a "zigzag line" which requires a considerable amount of time to address a problem.

"I think that the point is the organisational structure and management mechanism. In the past only one district health centre was in charge of both curative and preventive functions, including development of vertical programs, RH services and population programs. The additional function was to advise the DPC on delivering health administration. In short, the PHC or any other provincial bodies, any departments of DPC worked only with leaders of district health centres. Now if you want to undertake some work, you have to go through a zigzag line. It depends what responsibility belongs to which unit, hospital or district health centre, or health bureau or centre for family planning and population. Oh, it's very time consuming, but that still does not take disunity into account".

District level _Manager_13

Specifically, in the past all health-related activities were managed by the former District Health Centre and the Centre was proactive in cooperating with other health facilities within the district and the DPC. Therefore, the health sector was able

to mobilise more resources, and health-related activities were developed in a timely and effective way. In the past, the former District Health Centre consisted of a hospital, a preventive medicine team and a RH team and they used to work together to implement health programs within the district. The District Health Centre thus had the flexibility to deploy and rotate their HWs within the centre in order to implement any program, particularly in an emergency or in epidemic prevention. Since the separation in 2004, the District Health Bureau has been under the management of the DPC, while the DH and the new DHC have fallen under the supervision of the PHD. It is noticeable that CHCs were under the DHB, so the development of health activities was dispersed, in terms of financial resources and human resources. Moreover, it takes more time than in the past to make a plan for a program since the DHC or DH need to report to the DHB first, and then get the approval from the DPC before they can implement the program at CHCs.

In practice, the unclear responsibility of the DHB (discussed in the previous section) coupled with the lack of cooperation has reportedly led to inconsistency among different units in work implementation.

"The DH considers that the DHB is not so important, so sometimes they do not discuss with us about the activities to be implemented at CHCs such as examination and treatment, drug and medical equipment supplies. They just go directly to CHCs to run their programs. When we received the report, all of the activities have already been developed".

District level _Manager_2

In contrast, the DH and DHC managers considered their organisation to be responsible for direct implementation of a program, not the DHB. There seemed to be a disagreement in supervisory responsibilities of district health units that reportedly caused delays in many processes at the CHC. The overlap and/or misunderstanding of responsibilities of the DHB and DH in the health insurance payment process shared by respondents was one example of the imprecise description of the functions of the district health units. As introduced earlier, the DHB administratively managed CHCs but the DH was also in charge of supporting CHCs with examination and treatment, including drugs and health insurance payments. Hence, both had their own reasons when arguing about their responsibilities for the health insurance payment process. Below is a complaint from

a DH manager about the difficulties they faced when working with the DHB in their district.

"For example, when we sign a contract with a health insurance company for examination and treatment activities [which also covers health insurance contract for CHCs], we know that we must be responsible for the whole process. Therefore, the documents related to health insurance reimbursement at the CHCs should be sent to us for synthesis and recording, but instead they [DHB] send them directly to the health insurance company. Only when the health insurance company refused to receive them, then all the documents were sent back to us".

District level _Manager_12

In addition, ill-defined responsibilities, divided loyalties and a lack of clear cooperation mechanisms were reported to result in dysfunctional joint meetings. With three district health units that were considered to have equal powers, collaboration was thought to be affected by the unit leaders' attitudes.

"The regulation on collaboration may exist, but if they are not unified and collaborative, he [a leader of one district health unit] can refuse my invitation to the meeting because I am not his boss. But if the chair of DPC or leader of PHD calls the meeting, I obviously have to go".

District level _Manager_13

Respondents acknowledged that there needed to be strict regulations to force these district health units to collaborate effectively.

"If each of them considers themselves powerful, it is very difficult to work together".

District level _Manager_13

To sum up, there was a lack of collaboration among different actors in developing work relations. This can be interpreted as weak accountability of individual actors to their roles as supervisors of CHCs, which resulted in ineffective management of CHWs. This complex arrangement of management and service responsibilities was acknowledged by respondents to have an impact on MH services. The next sections will illustrate how the governance framework influenced the organisation of MH service delivery and the MH workforce.

8.3.1.2. Difficulties in task assignment and performance management

As described by the respondents in this study, the current organisation of district health services has revealed shortcomings that result in asynchronous, ineffective and inconsistent management of CHCs. This part of the chapter will focus particularly on the Lao Cai province, where the CHCs were still under the management of the DHB and DPC but not the PHD. A district manager talked about the current organisation of district health in her province.

"The fact is that our system is not good. Our current management is disconnected and inconsistent. I think health activities should be centralised, that it needs to have a centralised direction. In the district there are too many district health units that all supervise CHCs. CHCs are actually not hard working but they are supervised by many units. Too many bosses can lead to desultory command. That is inconsistent".

District level _Manager_2

In Lao Cai where CHCs are supervised by the DHB, the fact that the DHC and DH assign the tasks for CHCs, but are not the bodies that pay salaries and do not have a voice on personnel decisions, was seen as problematic. It was considered difficult to assign workloads and manage the performance of CHWs.

"Talking about the management system, I see some problems. The District Health Bureau is in charge of the personnel in CHCs, but the District Health Centre and District Hospital supervise them technically. One person pays the salary and others assign tasks; things are not synchronous. For example, I force you to do many things but I do not pay you, it sounds difficult in management practice".

Provincial level _Adminstrator_5

Since CHCs were under the supervision of the DHB but not the PHD, respondents reported that it was relatively difficult to adapt the technical direction of the PHD to CHCs. Although the DHC was assigned to direct the implementation of vertical programs, including RH and MH, it was not directly responsible for managing CHCs. As a result, any program it developed needed to get approval from the DHB. More importantly, as the DHC were not direct managers of CHCs, respondents from the DHCs acknowledged that the results were not as they expected.

"I do not see this organisation as suitable, it is complicated. In the past, the district health centre managed it all. Here, the DHB manages CHCs, DHC does not supervise them but we still have to develop vertical programs for CHCs. Although

CHCs still work with us we are not the people who to pay them so the work is not done to our expectation".

District level _Manager_18

The DH was assigned to direct CHCs to implement examination and treatment, but they also had difficulty supervising them. Respondents from the DHs expressed their concern about the accountability of CHCs to the DH when they were not their direct managers.

"The situation is like two or three nooses put on one head of the CHC. One person pushes them to work, and the other pays the salary. Our hospital is responsible for the provision of the budget for examination and treatment and drugs but in fact we do not manage them. So if some mistakes or losses happen, we find it difficult to deal with. This is an economical issue. The second one is a technical issue. CHWs are under the management of the DHB and we only provide them technical supervision".

District level _Manager_12

It was clear from respondents that the key HR functions which include staff supply, performance management, personnel administration, and education and training (Martinez & Marineau, 1998) were separated and assigned to different district health units. In this context, those units managing the tasks were not assigned to manage personnel, and vice versa. The current situation was described as several lines of management over CHCs, while in reality, CHCs were arguably limited in human resources in terms of qualifications and in-service training opportunities. As a result, the accountability of CHCs and their responsiveness to different supervisors was also probably limited. On the one hand, district level supervisors undoubtedly found it hard to manage CHCs, but on the other hand, CHWs possibly felt uneasy having an overcomplicated management system. The perspective of CHWs on the current organisation of district health is discussed in the next section.

8.3.2 Perspective of HWs from the commune level on the current organisation of district health

Like other provinces of Vietnam, the separation of district health in the study provinces had an impact on the operations of the CHCs. Many CHWs complained about having too many "supervisors". The separation of district health, which aimed to focus on vertical programs more efficiently, resulted in complexities in the

organisation at the commune health level. While CHCs were technically supervised by the District Centres (by vertical programs), by the District Centre of Family Planning and Population, and the District Hospital (for curative services), they also had to report to the District Health Bureau and the District People's Committee that recruits and pays staff.

The functioning of the CHCs therefore depended heavily on the administrative and managerial collaboration between of all these district level units. Respondents complained about this situation:

"If we are talking about adequacy, it is not. We [CHC] are under the different supervisions, technically and administratively. So we imagine it as having 3-4 nooses on our head. It is very complex".

Commune level _Manager_2

At least three types of dysfunctionality were identified. First, CHCs had to be accountable to many managers for many tasks with their limited number of personnel and limited competencies. In some cases, they did not know how to respond since each "boss" had a different direction and "the bosses rarely sit together". As reported by a respondent, the inconsistency of instruction and work direction created difficulty for CHCs in implementation.

"Each person that comes to inspect has their own instructions. This person instructs us to do one thing, the other may instruct us to do some other thing, and then we have to redo things. In general, it would be better if they could work together closely".

Commune level _Manager_4

Inconsistent instruction from district health supervisors clearly led to either confusion of CHWs or the CHWs developing a distrust of their supervisors. More importantly, in the long run, this may create "the low responsiveness" of CHWs as a coping strategy to avoid redoing some work, since they would have to wait for final instructions from supervisors.

It was also reported by district level respondents that ineffective collaboration amongst district health units led to an overlapping sequencing of programs and this was considered to create difficulties for CHCs in terms of work development. For

example, the program of family health planning and extended vaccination program may take place on the same day in CHCs causing difficulty for CHWs.

The productivity and performance of CHWs therefore were highly concerning for many respondents. It is evident that "when there are too many tasks to perform, CHWs may not perform them all but instead select a few that they prefer to do, ones that they do best, or those that are most feasible" (Jaskiewicz & Tulenko, 2012). Moreover, a previous study showed that during the devolution period, some HWs were accountable to different authorities and functioned in a vacuum (Lodenstein E. & Dao D., 2011). Consequently, some of them did not report for work. This issue has raised the question of how to manage accountability of HWs at lower levels in this context.

Second, there was a perception by CHWs, that the administrative paper work, was time consuming and involved unnecessary duplication. "Having too many bosses at the same time" and complicated reporting systems due to ineffective collaboration between district health units were issues repeatedly raised by respondents**.** Too much seems to be demanded of CHCs by district health units in terms of reporting. It was commonly agreed that this paper work contributed to the workload that CHCs had to shoulder even while many of them lacked HWs.

"We have to submit many kinds of report. If the DHC collaborates well with the DHB, CHCs do not have to send reports to the DHB. Monthly we have to submit reports to the DHB on personnel, medicine use and some other vertical. We have to report about examination and treatment for insured patients to the hospital, vertical programs to the DHC, some state administration programs to the DHB, and about population and family planning programs to the Centre of Family Planning and Population. The regular operation needs to report to the Commune People's Committee. At the same time, we have to make many reports".

Commune level _Manager_4

It was evident that while in the past CHCs did reports for the former District Health Centre, at the time of this study CHCs were obliged to submit reports to at least three bodies, the DHB, the DH and the DHC, and also had to do a considerable amount of paper work related to health insurance payment procedures. Writing reports was considered to take up a large proportion of the working hours of CHWs.

Some respondents emphasised that there were dozens of reports, including weekly, monthly, quarterly, and annual reports that they needed to submit to three district health units and other bodies. This definitely reduced the time they could spend on clinical work and therefore influenced their job performance.

In many districts, CHCs only submitted specific kinds of reports relevant to each supervisor, not a report about the whole operation of CHCs. For example, CHCs reported only the examination and treatment activities to the DH, and the implementation of vertical programs to the DHC. Therefore, the three supervisors would not grasp the whole operation of CHCs if they did not collaborate closely. This may be the main reason for the disconnection in the management of health services at the district and commune levels.

Third, as explained in the previous section, supervision of CHCs overlapped in some cases, whereas some areas were neglected with little or no concern from district health supervisors. The instructions about how to process health insurance reimbursement was one example. The complex health insurance reimbursement process (mentioned in Chapter 7) not only annoyed clients but also created 'trouble' for CHWs. It was claimed that the guidelines for insurance reimbursement were unclear and many CHC respondents felt that they did not fully understand it.

"The main thing is that we are not instructed about the reimbursement regulations and procedure. We dare not perform many services since we do not know if they will be reimbursed or not. We do not grasp the insurance reimbursement procedure. Well there has not been clear instruction".

Commune level _Manager_3

Since in the CHCs there was no representative from the insurance company to take charge of insurance reimbursement, one HW from the CHC was assigned to this task. Since CHWs do not actually have experience in dealing with financial matters and have limited computer skills, they reportedly struggled with this task and occasionally made mistakes. In such a case, the CHC would not be reimbursed the fee for the service that they had provided to clients.

"To handle the insurance reimbursement HWs need to be good at computer skills but CHWs in general are not, or most of them do not have these skills. If they type one wrong letter [e.g. in the name or the birthday of patient], it can be a big problem. Such mistakes can "cost" CHCs 50,000 to 70,000 VND".

Commune level _Manager_4

According to respondents, such difficulties have existed for many years and have been left unresolved despite many complaints being made. The supervisors of CHCs here were compared to "fathers" by a commune manager. He said:

"No one likes to have many fathers coming to you with a stick and admonishing you at the same time. If all fathers collaborate well, the children living underneath are less miserable. I think having only one person supervising you and taking care of you is much better that having many supervisors. But we are afraid that in our situation, many people give direction but none of them can take care of us. Every man for himself. Only the CHC is left".

Commune level _Manager_4

Respondents indicated that although CHCs were supervised by many units, it seemed they did not get sufficient support. From a governance perspective, responsibilities remained in the hands of several bodies at a time resulting in parallel lines of accountability. This issue was reported to generate many conflicts that affected HW motivation (Lodenstein E. & Dao D., 2011).

To sum up, the managerial organisation of the CHCs was made overcomplicated by the multiple accountabilities. Complaints were made by both sides, the supervisors and CHCs. This demonstrated that, on the one hand, supervisors found it hard to manage CHWs performance since they were in charge of only one of the HR functions and all of them found themselves not "powerful" enough. On the other hand, CHCs were confused with district health directions and overloaded by paper work, all of which all resulted from having multiple supervisors. The influence of district health organisation on CHWs is illustrated in Figure 8.3.

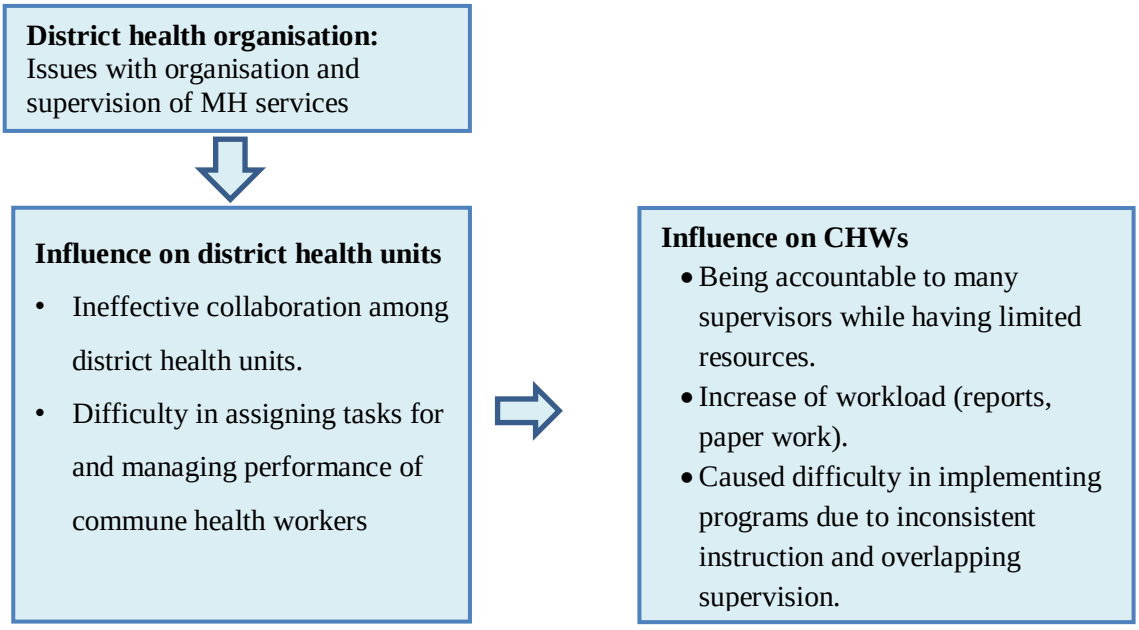


Figure 8.3 Influence of district health organisation on CHWs

The available evidence indicated that at the district level, the current governance framework significantly influenced availability of human resources, and caused difficulty for district health units in managing the performance of CHWs. At the commune level, it affected the quality of supervision and increased the existing workload in CHCs.

8.4 GOVERNANCE-RELATED FACTORS IN RELATION TO HUMAN RESOURCE MANAGEMENT

It has been commonly accepted that governance and management at the national level plays a critical role, primarily in policy making and development of human resource plans and strategies. At the provincial and district levels, governance and management are essential in implementing government policies and plans (Vietnamese Ministry of Health and Health Partnership Group, 2009). This section describes the influence of local governance arrangements on HWs through HRM practices.

8.4.1 Issues with levels of autonomy in HR recruitment

Respondents were clearly of the view that health facilities have not been fully granted autonomy in terms of planning and recruitment processes. Two types of controls were identified by respondents.

First, respondents identified the importance of the staff norms regulated by the Joint Circular 08/2007/TTLB-BYT-BNV (Vietnamese Ministry of Health, 2007)

issued by the Ministry of Health (MOH) and the Ministry of Internal Affairs in 2007 (abb. as Circular 08). This Circular defined staffing numbers based on population numbers, technical level, grade/rank of the facility, tasks in epidemic prevention and control, local socio-economic and ecological characteristics, as well as financial resources. This circular restricted the number of official staff that could be recruited in each facility. For profitable facilities, such as hospitals, the number of staff is calculated per number of beds that were the basis of the budget allocated for each hospital. In other non-profit health facilities such as district health centres, the number of staff is based on the staff norms regulated in Circular 08.

"All health facilities make a HR plan based on the staff norms in Circular 08 issued by the MOH and submit it to the PHD. After that, the PHD gathers all plans and submits the HR plan to the Provincial Department of Internal Affairs (PDIA). If we compare with the standards in Circular 08, our province has achieved a sufficient quantity of staff, but not the ratio of medical doctors".

Provincial level _Administrator_2

The second type of control on the recruitment process was the centralisation at the provincial level. The provincial People's Committees and Councils have considerable authority over allocations to and within the health sector. It is generally understood that local governments have historically made budgeting allocations based on health sector inputs, such as the number of staff, beds and facilities, rather than initiate alternative approaches based on local health needs. Informants commonly acknowledged that the Provincial People's Committee (PPC) and PDIA directed the recruitment process and had a strong influence on the process.

"In almost all provinces, the PPC has not decentralised recruitment for the health sector, the PDIA still embraces all the issues related to recruitment. The Health authority is just an implementer".

Central level _Administrator_1

Prior to the recruitment process, there is a long and complex process starting with planning by a district health unit through approval processes at the PHD, PDIA and then to PPC levels. The role of the PHD in planning is as the advisor for the Provincial People Committee. In reality, the PHD acts as the agency that gathers

information on health facilities and then submits this to the Provincial Internal Affairs Department and People's Committee for approval.

"The PDIA evaluates the HR needs of health facilities and recruitment results. If they approve these results, they will inform the PHD and our work then is to issue the recruitment decision".

Provincial level _Administrator_2

"Our province is quite different from other provinces. The recruitment process is organised by the PPC. The Vice of the PPC is the chair; the PDIA is a permanent member and the PHD collaborates with them. The method of recruitment is decided by the chair and is either by competition or by evaluating a candidate's profile. So it assures transparency and equity".

Provincial level _Administrator_1

Lack of control in the recruitment process reportedly negatively affected several managers of health facilities who considered themselves as employers but employers without the right to choose staff. Many respondents expressed their disappointment when they were the last ones to meet their new staff, implying that they were not invited to participate in the recruitment processes.

"I do not have any rights. They [new staff] pass the recruitment competition at the province. People coming from my district may fail to apply to work in my district and then have to go to another district to work. Similarly, people coming from other districts can go to work in mine".

District level _Manager_13

This was echoed by another district manager when he mentioned the "strong influence" of the provincial level in the recruitment process at the district level.

"...the recruitment process involves some other issues. Sometimes the selection of candidates is not decided by the facility but overridden from a higher level, so it affects our work".

District level _Manager_4

It is often argued that managers need to set out a HR plan and recruit competent staff in order to make sure the organisation operates efficiently. However,

in this context, the HR plan of health facilities were mostly based on Circular 08 that restricted the number of staff so managers seemed not to have much flexibility. In addition, since the recruitment process was controlled by the provincial level, district health managers were less proactive and less responsible for the personnel management tasks. To a certain extent, this situation may demotivate managers and lower their accountability as health managers.

"In fact, we just make a HR recruitment plan. We have never thought about whether it is suitable or not. I think we just follow the procedures. And its appropriateness depends on many other issues. We have no way to address it by ourselves. This is a decision from the PPC which nominates PDIA in charge of recruitment for civil servants and government employees of all sectors".

District level _Manager_7

Previous studies have confirmed that health facilities had not been given full autonomy in carrying out human resource management. The detail of HRM components and degree of decentralisation is explained in Table 8.1.

Table 8.2 Decentralisation of health workforce management in Vietnam

Recruitment	
Have authority to hire	**
Have independent recruitment mechanisms	*
Career development opportunity	
Appointment to higher position/title	*
Rotation of staff at facility level	**
Management of work performance	
Direct and indirect supervision	***
Evaluation of work efficiency	*
Offer financial rewards	**
Can discipline and fire underperforming staff	**
Salary/bonus policy	
Salary scale	*
Bonus scale in each facility	**

*=not yet decentralised, depending on common policy;**=partially decentralised; ***=fully decentralised.

Source: (Fritzen, 2007; Vietnamese Ministry of Health and Health Partnership Group, 2009)

While all health facilities expect to have direct involvement in HR recruitment, there is concern among respondents at the provincial level about the capacity of district health facilities to attract and retain staff. If all provincial health facilities were granted full autonomy in staffing recruitment, the medical labour market would be subject to a market mechanism. Without some control from the provincial authorities, there is a risk that the inequitable distribution of health staffing in terms of quality and quantity would be worsened as provincial hospitals and facilities in urban areas would be likely to be more successful in attracting experienced HWs. This could exacerbate the staff shortages at the district and commune levels.

"If we release control on HR recruitment, I can assure you that the district level will not have any medical doctors, even the upgraded medical doctors. In the provincial hospital, if we do not have a mechanism to keep staff, they definitely go to Hanoi [the capital of Vietnam] to work because the private clinics there pay a very high salary, say, ten, or twenty million per month or more".

Provincial level _Administrator_1

Research from another country showed that decentralisation can contribute to the increased employment of unskilled HWs (Liu et al., 2006). In the Tanzanian context, centralised recruitment was considered more effective in recruiting highly skilled HWs and distributing them across district needs (Munga, Songstad, Blystad, & Maestad, 2009, p. 9). One of the reasons for this was that better qualified HWs moved to work in higher positions at more facilities. Therefore, one question to guide discussion is the balance between the degree of autonomy given to health facility managers in carrying out HRM and ensuring availability of HWs with the adequate competencies.

8.4.2 Issues with the current methods of recruitment

Respondents in both provinces reported that the method of recruitment may influence the quality of staff recruited. There are two recruitment methods being used in provinces: recruitment by competition (which is based on the results of a written and verbal test of knowledge and skills), and recruitment by evaluation of a candidate's profile (which is based on the review of grade point average (GPA) and academic achievement of the candidate). Both methods are regulated in the Law of

Government Employees and Civil Servants issued in 2010 (Vietnamese National Assembly, 2010, Art.24). Both study provinces mainly use recruitment by evaluation of the candidate's profile.

While recruitment by competition was perceived as more objective, transparent, equitable and competence-based, it is more costly compared to the second method.

"Recruitment by competition does not require an excellent degree but if you evaluate a candidate's profile, those who have an average or good degree have little chance of being selected unless they have a personal relationship with people at a higher level. Recruitment by competition must be more costly but more unprejudiced".

District level _Manager_5

Recruitment by evaluation of a candidate's profile, while more convenient and cheaper, has several disadvantages. The evaluation result depends on the quality of training and education of the institutions from which the candidates have graduated. This can vary substantially since the accreditation of educational programs for general doctors, university degree nurses and some other health cadres has not been implemented yet (Vietnamese Ministry of Health and Health Partnership Group, 2012). In addition, the quality of training in general and in the medical field in particular has declined in recent years because of substantial increases in the number of enrolled students which now exceeds the limited capacity of training agencies (Vietnamese Ministry of Health and Health Partnership Group, 2012). Bias in the evaluation process is therefore inevitable, as acknowledged by some respondents.

"The implementation of this method has one limitation; for example, we cannot control the quality of the candidates. By experience, we choose medical doctors who graduated from Hanoi Medical University first, then from other universities. But for nurses, I see those from Hai Duong nursing school are very good. The problem is the grade point average of these schools are normally low, so if we simply rank students' GPA from highest to lowest, we are not sure which ones to choose. In addition, some medical schools always offer very high GPAs to students to help their students easily get jobs".

Provincial level _Administrator_1

In recent years, many medical schools have been established while standards for the quality of training and education have not been controlled. The problem employers faced when they evaluated candidates' profiles was that students who came from high-ranking or well-known universities often did not have very high GPAs compared to their peers who had graduated from other universities. However, in reality, the evaluators did not have any basis to judge which university was better, and therefore in almost all cases they needed to base decisions on the scores awarded to candidates. It is clear that this method may lead to the selection of inappropriate or even incompetent employees.

It was argued that recruitment processes could have been more effective if health facility managers had been encouraged to be more actively involved in the process and been given more responsibility to evaluate new staff during the probation period. For example, facility managers who employ staff should participate in the recruitment committee and have a voice in recruitment decisions.

"In fact, evaluation of a candidate's profile is good and in accordance with the current Law on Civil Servants, but the new recruits must complete their probation at the health facility. I mean that the host facility should be given the right to evaluate the new staff during this probation time to see if he/she meets the job requirements. There also needs to be a transparent and unprejudiced committee. However, in our province, the recruitment decision is made by the PDIA, not the health sector. The PHD just acts as an adviser, so it is an issue".

District level _Manager_5

While both methods of recruitment are regulated by Law, recruitment by evaluation of a candidate's profile was preferable due to its convenience and low cost. This approach paralleled the limited discretion of health facility managers over staff firing, which could result in increasing numbers of low skilled and inadequately competent staff. Subsequently, this could not only cause demotivation of these very HWs but lead to staff shortages in terms of competencies and qualifications, which in turn will affect the motivation and performance of other HWs. The issue of staff shortages will be further discussed in Section 1 of Chapter 9.

8.4.3 Issues in evaluation and management of health worker performance

There was a common consensus that a performance evaluation system was in place but that it was ineffective. It was reported that "the manager who is the closest to the individual HW, and therefore makes the best judgement about his or her performance, does not have actual power to take appropriate action" (Martinez & Marineau, 1998, p. 350). For example, manager's comments or recommendations for HW performance may have to be referred several levels up before a final decision is made. The discussion in the next parts of this chapter will focus on the actual role of managers in relation to the probation period for new employees and in the employment termination procedures.

8.4.3.1 Unclear probation period for new employees

In any organisation, including health facilities, the probation period of a new employee is considered important. It allows supervisors to closely evaluate the progress and skills of the newly hired worker and monitor other aspects of the employees such as honesty, reliability, and interaction with co-workers in the work place. Although the Law on Civil Servants issued in 2010 regulated the probation time of 3-12 months for new recruits (Vietnamese National Assembly, 2010, Art. 27), it has been variably implemented or implemented in a formalistic manner in health facilities.

"The difficulty is that we want to assess new recruits to see if they can handle their job, but we do not have time. As you know, currently, education follows a market mechanism, it is not known how competent the new recruit is, and whether medical doctors, nurses or midwifes perform well. The probation time is lacking".

District level _Manager_10

In some districts, work undertaken in the probation period was reported as either not challenging or very easy for most new recruits as it did not really test their competencies. Many managers emphasised that in their facilities, there was not a set of criteria for the probation period, or if it existed, there was only a list for checking punctuality and some 'yes or no' questions regarding the behaviour of the new hired worker. The assessment criteria for the probation period were considered non-specific, so managers could not precisely evaluate the new employees.

"In fact, after graduation from a medical school, almost all new recruits meet job requirements unless the job is very difficult. The work requirement during probation is not difficult. We have to accept that".

District level _Manager_7

Therefore, although the new recruits were supposed to have a six month probation period to prove that their competencies met work requirements, a lack of specific criteria set for probation and the absence of clear job descriptions of staff resulted in difficulties in evaluating work performance (Vietnamese Ministry of Health and Health Partnership Group, 2009).

In addition, unchallenging probation periods reportedly led to situations where incompetent staff were still eligible to continue working. One manager expressed his disappointment when identifying that he had no way of dealing with incompetent new staff other than sending them for further training.

"... in this context, we just receive new recruits, but the quality of staff is not assured. There was a case of a medical doctor who was recruited and sent to us. I actually did not know how to assign tasks to him, or where to put him. Eventually, I sent him to learn laboratory testing and let him do testing. But to be honest, it was not appropriate and I lost one position for a doctor who really couldn't work as a doctor".

District level _Manager_3

On the basis of the evidence currently available, it seems fair to suggest that the current recruitment process that does not pay attention to the probation period, significantly influences the quality of hired staff. Coupled with a recruitment method of reviewing a candidate's profile, it partially contributes to the existing problem of staff with low competencies. Moreover, these issues also affect the morale of health managers who feel disempowered in carrying out HRM functions.

8.4.3.2. Issues with unclear mechanisms for termination

An unclear mechanism for employment termination was reported as a problem for health facility managers. Many managers complained that once a person was recruited, it would be very difficult to dismiss him/her even though he/she was incompetent. This observation was similar to the results of a study in China assessing

the decentralisation process which also indicated difficulty in terminating staff (Liu et al., 2006). In this study, one manager asked how he managed incompetent new recruits, said:

"We have to bear him…Despite the fact that he does not meet the job requirements, I have to assign him other tasks, and otherwise it would be hell if let him sit there and receive a monthly salary doing nothing. After that, he needs mentoring. There's no way to dismiss him, we do not have the right".

District level _Manager_5

In fact, the law states that health managers have the right to terminate contracts with those staff who seriously violate the organisation's rules or repeatedly do not meet job requirements (Vietnamese National Assembly, 2010, Art.29). Nonetheless, in practice, job evaluation criteria have not been clear or standardised, and thus almost all staff have been assessed subjectively by observation. As a result, health managers do not have concrete evidence to dismiss their incompetent staff.

"... Presume we have 35 staff but I need only 30, so it will be a surplus of 5 staff. Who could help me to address this problem in terms of procedure? It involves policy and regulation. The key to the question is granting you autonomy, if you have the right to receive and dismiss staff, they may be afraid [of losing their job]".

District level _Manager_13

Martinez and Marineau (1998) indicated the political influence on HR management, and that the decisions made about personnel could be overridden by higher levels of governance. Consequently, the actual dismissal of staff that were incompetent or performed poorly became impossible. This was echoed by district managers who identified difficulties in HRM practice.

"If you follow the autonomous policy, Decree 43, you are responsible for your recruited staff. But why don't we have the right to terminate? Now once they [staff] were recruited and became civil servants they could make themselves comfortable. They do not meet the job requirements but just go to the office in the morning and come back in the afternoon, everyday".

District level _Manager_5

With limited skills of HRM, health facility managers admitted being subjective about evaluation of their staff performance. This was reported to cause "unfairness" to people who did more work and contributed more to the organisation compared to their peers.

"It turns out that those workers who are active and work more will be more likely to make more mistakes. Whereas, those people do little work or do not do anything will rarely have faults".

District level _Manager_12

In summary, the current local governance arrangement influences the recruitment processes, the evaluation of HW performance and the termination processes. This section has particularly highlighted the issue in the management of HW performance. On the basis of analysis, the evaluation system was reported to be disconnected from actual performance and "consequently ineffective, and possibly even harmful, as a management tool" (Martinez & Marineau, 1998, p. 350). Figure 8.4 describes how governance framework influences the health workforce through HRM practice.

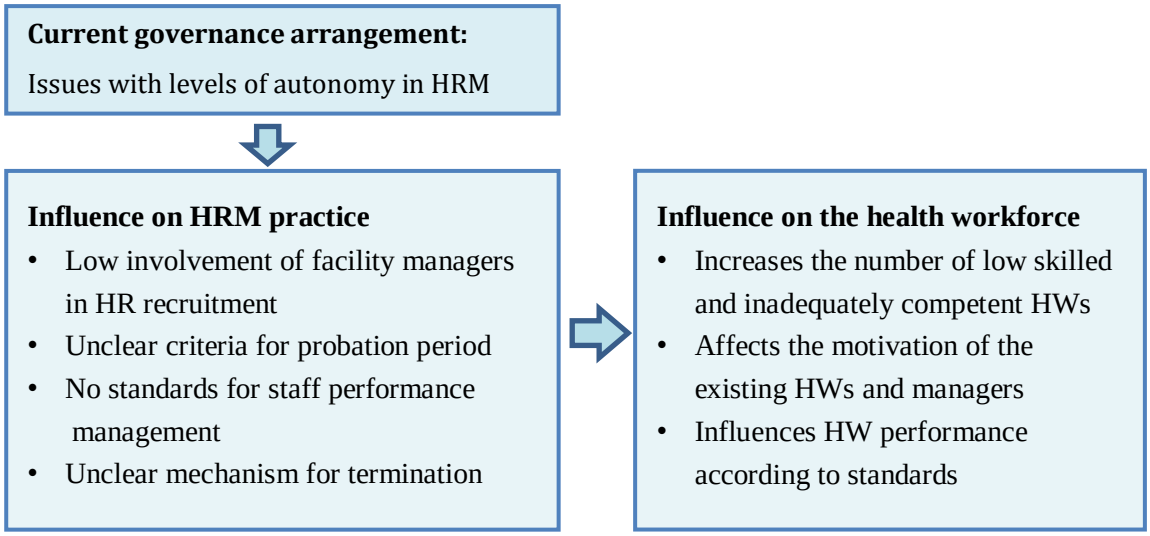


Figure 8.4 Indirect impact of governance framework on the health workforce

8.5 SUMMARY OF GOVERNANCE-RELATED FACTORS INFLUENCING HEALTH WORKER MOTIVATION, COMPETENCIES AND PERFORMANCE

The general aim of this chapter was to provide a more insightful understanding of how the current governance framework impacted on the organisation of maternal

health service delivery and human resource management at the commune and district levels. Governance-related factors and health policies were introduced in Chapter 3 to influence HWs through organisational factors.

First, it suggests that after district health reform, the current system is overly complex with multiple and overlapping lines of management and accountability. This has caused ineffective collaboration among district health units, making it difficult to assign tasks for and manage performance of CHWs. It has also influenced the operation of CHCs. Ultimately, it can be reasonably concluded that the current governance framework had an impact on organisational factors. In particular, it resulted in staff shortages (in both quantity, qualification and expertise) at the district level. On the other hand, it also led to poor quality of supervision of MH services at the CHCs and increased the workload for CHWs.

Second, the current governance framework had specific effects on human resource management as managers felt constrained in how they could manage individual staff and workloads. The complexity also impacted on the recruitment processes, which, while achieving some level of staffing equity across geographic levels, resulted in a further lack of management control and lack of responsiveness to local needs. Moreover, lack of the standardised method of staff performance evaluation and the unclear mechanism of termination apparently reflected managerial issues in improving staff performance. Decisions in relation to HRM were reported to be overridden by higher governance levels and health facility managers were unable to take appropriate action. This was reported to not only influence managers' morale but also to affect HW competencies, motivation, and performance.

How these organisational factors in turn affect motivation, competencies and performance of HWs will be discussed in the following chapter. Chapter 9 will explore the organisational factors perceived by respondents to affect motivation and performance in the study locations. It also explains the interconnection of these factors in relation to the ways that they affect HW motivation, competencies and performance.

Chapter 9: Organisational factors

9.1 INTRODUCTION

Organisational factors are critical to assuring the quality of services. These include resource availability and efficiency of processes, human resource management (HRM) practices, and organisational culture (Franco et al., 2002). In the conceptual framework of this study (presented in Chapter 3), these factors were described as second level factors affecting health worker (HW) performance, which in turn were influenced by governance-related factors. This chapter describes the importance of organisational factors as influential factors on HW competencies, motivation and performance, as perceived by respondents in the study locations. Sections 9.2-9.4 cover issues related to current human resource (HR) availability in provinces, training opportunities and salaries and supplements. Section 9.5 describes the health facility infrastructure and resource availability including facility infrastructure, medical equipment and drugs. Four main sub-group factors perceived by respondents in the study locations are illustrated in Figure 9.1. In each section, various dimensions of organisational factors are also considered. The final section provides a summary of how organisational factors together influence HW competencies, motivation and performance. In this chapter, the overlap with Chapter 8 in several places, including supervision and HRM indicates that the governance framework really does have an impact on organisational processes.

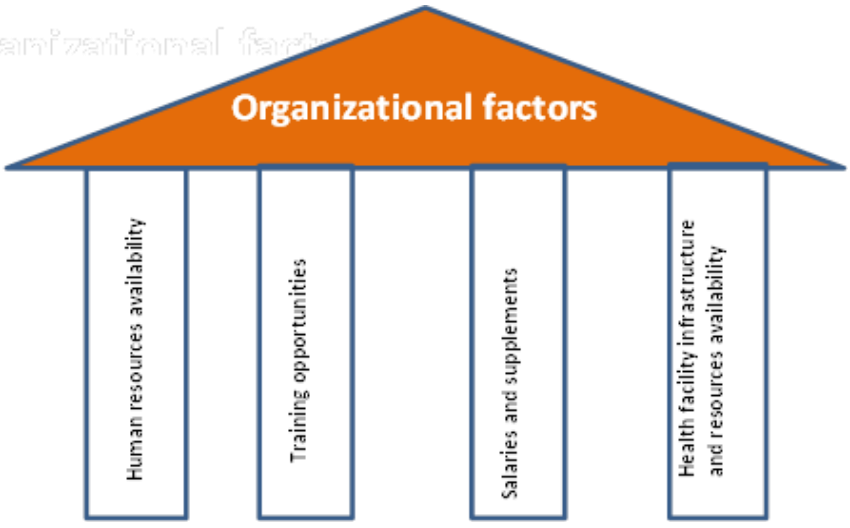


Figure 9.1 Four sub-group factors of Organisational factors perceived by respondents

9.2 HUMAN RESOURCE AVAILABILITY

The quantity and quality of human resources is critical to effective health services, including maternal health (MH). The lack of human resources is considered one of the main obstacles to achieving the maternal and child health related Millennium Development Goals (MDGs) (Hoope-Bender, Liljestrand, & MacDonagh, 2006). Evidence continues to suggest that the availability of skilled health workers is critical in assuring a high quality of healthcare services, including antenatal, delivery, emergency obstetric and post-natal services (Dogba & Fournier, 2009; Duong et al., 2004; Gerein et al., 2006; Olsen et al., 2005).

So far, while many studies have examined the impact of inadequate resources such as drugs, supplies and equipment on competencies, motivation and performance of the individual HWs, little has been published on how HR shortages (e.g. HR availability or HR qualifications) influence motivation and performance of HWs. It is generally accepted that an individual's performance in a particular role is highly dependent on the pre-service training they received (as reflected in qualifications) and their competencies (Rowe et al., 2005). However, it is less clear how these individual components affect the productivity and performance of other colleagues, and in turn the quality of their services. This section first describes the current state of human resources for health (HRH) at the commune and district levels of the study locations in terms of HR establishment, HR qualifications and expertise. After that, it explains the influence of different dimensions of HR shortages on HWs, which captures aspects such as workload, work-related stress and quality of supervision.

9.2.1 Issues with HR establishment

As discussed in Chapter 8, staffing levels in health facilities are calculated according to Circular 08 which regulates staff norms and staff establishment such as the ratio of technical staff and administrative staff. This means that in some facilities the quantity of staff may be considered sufficient according to Circular guidelines but the quality of staff does not meet the facilities' requirements. One head of commune health centre (CHC) expressed his concern.

"In fact, with the current workforce we cannot meet the CHCs' requirements. For example, we need only one secondary nurse but we have two, so one is redundant. We need to have a medical doctor, or an assistant doctor. At present, there are two assistant doctors in my CHCs but one is in charge of population health. I am an

assistant doctor and am the head of CHC so I always have to work very hard, both at the managerial job and at doing examinations and treatment. The assistant doctor in charge of population only supports me when she completes her work. So we have six staff but they are still not sufficient to meet the work requirements".

Commune level _Manager_2

The redundancy of some positions in CHCs was pointed out by a midwife who thought that these were not actually needed for her CHC.

"Concerning HR in our CHCs, we lack some positions such as a medical doctor, but some positions are redundant. Our CHCs has six staff including two assistant doctors [actually, each CHC only needs one]. We have two general assistant doctors, one midwife, two secondary degree nurses and one elementary degree nurse. So now one of the assistant doctors and the elementary degree nurse are surplus while we need one pharmacist".

Commune level _Staff_3

In district hospitals (DH), staff shortages were also reported by respondents.

"The obstetric department has only one college degree midwife, the other three midwives have secondary degrees and one of them is going to retire. I think we are lacking at least three more midwives".

District level _Manager_9

Respondents reported a negative perception of the human resource establishment. In identifying that the current HR organisation was unreasonable, respondents noted staff shortages, but also acknowledged an excess of some workers who were not productive because of their skills set or roles relative to need. From a human resource utilisation perspective, this gives rise to questions about whether there are numeric shortages or just the wrong workers. In turn, if the problem is the wrong workers, given the current management policies, there is an important question of whether this problem can be addressed. The reasons for the lack of qualified HWs are commonly understood and similar to that found in other similar workplaces globally. The factors contributing to this situation were mentioned previously in the chapter discussing governance-related factors.

9.2.2 Issues with the level of qualifications

Inadequate competencies among existing HWs was considered to be as important as shortages in the health workforce (Harvey et al., 2007). The findings in this study are consistent with this statement.

According to the national survey of the RH network (Vietnamese Ministry of Health, 2011a), most of the heads of the RH Department of District Health Centre (DHC) hold secondary degrees and Lao Cai was not an exception. Respondents reported that almost all of the CHWs in charge of MH in both provinces were either midwives or obstetric/paediatric assistant doctors with secondary degree qualifications. Survey results showed that two thirds of MH workers working at district and commune levels had a secondary degree, as presented in Table 5.10 of Chapter 5. A number of respondents expressed concerns about these levels of qualifications.

"We have only one college midwife, all others are secondary midwives".

District level _Manager_11

It is widely understood that qualifications (or pre-service education) contribute considerably to individual competencies (Rowe et al., 2005; Traoré et al., 2014). A respondent from Lao Cai noted the difficulty in implementing the RH program (including MH services) in this province due to the low competencies of HWs.

"In general, the competencies of MH workers at the District Health Centre are not good. The majority of heads of RH departments are secondary midwives or assistant doctors. They are sometimes unable to grasp the objectives and activities of programs, so it is hard to implement programs".

Provincial level _Administrator_5

Another head of a CHC expressed concern about the competencies of his workers, though the quantity of HWs was sufficient.

"Generally speaking, HWs in our CHC are not competent enough to implement the primary healthcare responsibility. Some of them do not have the required qualifications. I think that among six HWs in the CHC, only four can work effectively".

Commune level _Manager_1

A lack of regular medical doctors (MDs) (who have 6 years medical training) was reported by respondents in both provinces. For DHs, staffing deficiencies have been considered an alarming issue, particularly in Lao Cai, which was seen as less attractive to MDs. One manager of a DH in Lao Cai shared the challenges of his hospital.

"The greatest difficulty of a district hospital is a lack of HWs with high qualifications. Recruiting medical doctors is extremely difficult. At present, our hospital has only 13 medical doctors. Therefore, we do not have any way other than to develop our workforce by providing our HWs with further training, to upgrade them from assistant doctors to medical doctors. As a result, the quality is not as we expect. So you know the lack of qualified HWs is the key challenge".

District level _Manager_12

The upgraded medical doctor program (i.e. doctors with 4 years training) was established for the specific and limited purpose of finding doctors for CHCs. The government implemented this program in a limited number of mountainous and disadvantaged provinces (as discussed in Chapter 1). However, in the context of the HR shortage, many hospitals have resorted to recruiting upgraded MDs.

"It is impossible to recruit regular medical doctors. We now recruit assistant doctors and let them work for 2-3 years before sending them to training to upgrade them to medical doctors. However, their competencies could never fully meet our requirements".

District level _Manager_5

In summary, a lack of highly qualified HWs was common at the district and commune levels of both study provinces. For example, most of the midwives working there had a secondary degree, while a majority of MDs were former assistant doctors who were not perceived to be as skilful as regular MDs. Generally speaking, a conclusion can be drawn that low qualifications may affect their competencies and motivation.

9.2.3 Issues with HR expertise

Apart from pre-service education, in-service or specialist training is important to improve knowledge and hence HW competencies. Governmental district hospitals typically are staffed by HWs who lack specialist training, and the few HWs who are

specialists are often overloaded with clinical or administrative responsibilities (FIGO Safe Motherhood and Newborn Health Committee, 2009). The current situation in Vietnam is similar to the global state of affairs in low and middle-income countries which have all been faced with persistent shortages of qualified HWs. The national survey of the RH network showed that in the north eastern provinces of Vietnam, only 26.2% of the 423 MDs working in the district hospital obstetric and paediatric departments were trained in obstetrics. The percentage of general MDs was approximately 70% (Vietnamese Ministry of Health, 2011a). In the current study, it was found that 57.6% of participants working in the MH network in Bac Giang and Lao Cai had obstetric expertise (detail described in Table 5.11, Chapter 5).

Concerned about the current workforce in her obstetric department, one manager in a district hospital in Lao Cai shared:

"Currently we do not have any medical doctors with professional training in obstetrics. I am the only person that has 10-month training in the Central Obstetrics and Gynaecology hospital, but after training I was assigned to work in the planning department. The second medical doctor is a general doctor and attended a 3-month course in Hanoi Obstetrics and Gynaecology Hospital. However, she cannot operate after an accident that injured her hand. So most of the surgeries performed in the obstetrics department were conducted by a medical doctor from the orthopaedic department who had a two week training course on obstetrics specialisation".

District level _Manager_9

The DHs should be able to safely perform comprehensive EOCs, such as caesarean sections, laparotomy, hysterectomy, repair of cervical and severe (third degree) vaginal tears, care for complications due to unsafe abortion, and safe blood transfusion, according to Regulations 385 and 23 (Vietnamese Ministry of Health, 2005; Vietnamese Ministry of Health of Vietnam, 2001). However, due to a lack of qualified HWs, caesarean sections cannot be performed at DHs in as many as nine provinces (Vietnamese Ministry of Health and Health Partnership Group, 2009). Among five surveyed hospitals, there was one DH in Bac Giang that in recent years has not performed any obstetric operations due to the lack of a surgeon.

"In this obstetric department there isn't any medical doctor who has obstetric expertise. Only the head is an obstetric medical doctor but they have not conducted

an operation in many years. Patients come here for medicine only, or to give birth. In the past there used to be one vice head of the hospital who had orthopaedics expertise that could perform almost all obstetric surgeries but he left the hospital years ago. Since then, the hospital has not been able to recruit any person to replace him".

District level _Staff_1

Compared to DHs in Lao Cai, the other two DHs in Bac Giang had more obstetric specialists. For example, each obstetric department had from 2-3 medical doctors with 2-year training in obstetrics who were able to perform obstetric operations. According to Decision 23/2005 issued by the Ministry of Health in relation to the technical assignment for different levels of health facilities, two districts in Bac Giang provided more than 80% of the services assigned for the district level.

"The obstetric department in our hospital has two medical doctors who studied for a further two years in obstetrics so they can do surgery. The third doctor has taken a 10-month training course on obstetrics. I am the director but I have external specialisation and I can also support this department, doing surgery for example. I think our HR is sufficient to meet the requirement. In my hospital, there are about 4-5 obstetric operations a day. We can do caesarean sections as well as most of types of obstetric operations assigned for the district level".

District level _Manager_5

To sum up, a lack of medical doctors with obstetrics expertise was reported in some of the districts in the study locations. This lack led to incomplete provision of essential obstetric care services, such as caesarean sections, that were assigned for the district level.

9.2.4 Impact of HR availability on health workers

The perceived impact of HR availability on MH workers is illustrated in Figure 9.2.

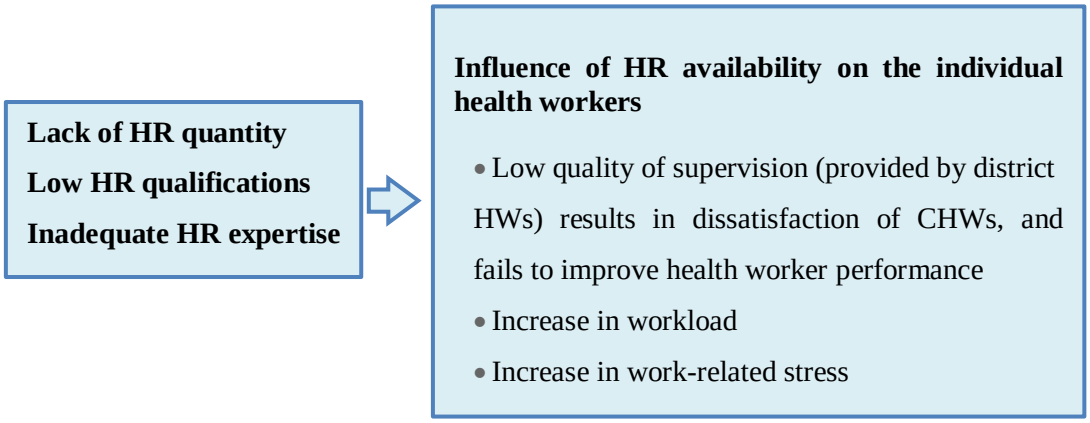


Figure 9.2 Impact of HR availability on health workers

9.2.4.1 Increasing workloads of health workers

Among other things, such as supportive supervision, equipment availability and respect of colleagues and patients, workload was identified as an important component of the working environment caused by inadequate staffing (Gurses & Carayon, 2009). Jaskiewicz & Tulenko (2012) noted that "workload plays a defining role in the level of productivity and quality that can be expected of health workers" (Jaskiewicz & Tulenko, 2012). In this section, respondents' perceptions about workload will be discussed in relation to multiple roles and night shift rostering.

Increasing multiple roles

The result presented in Table 5.12 in Chapter 5 showed that 47% of respondents in both provinces had more than eight night shifts per month. The qualitative research helps to elaborate and explain the findings from the quantitative research.

Many district hospitals also reported difficulty in assigning tasks for their HWs due to current staff shortages, particularly during night shifts. As a result, HWs working at night were required to perform multiple roles. For example, one manager could be assigned to take two positions at the same time, such as the head of the obstetric department and vice head of the planning department. The workload of both departments was very heavy due to HR shortages. Some research conducted in developing countries observed that HWs were not always carrying out their clinical responsibilities but instead were focusing on administrative matters (Lodenstein E. & Dao D., 2011). One district manager in the current study shared:

"That is, actually midwives in other places only do some things like transfusions or assist normal delivery and never implement placental removal. Here in our hospital due to the lack of medical doctors, midwives have to do many things. Especially during night shifts, only one midwife and a general medical doctor work together and obviously the midwife has to manage obstetric cases. Similarly, I am an obstetric doctor but when on duty, I have to manage all cases including paediatric patients, emergency, communicable diseases, everything and anything".

District level _Manager_11

And to illustrate the impact of staff shortages on daily work, she shared:

"I am the head of the obstetric department but still have to sit in consulting rooms because we lack HWs, so I feel very tired. Working hard and feeling tired, but sometimes I also have to replace the staff member in the ultrasound room when he is off. In general I have to work in different departments".

District level _Manager_11

This situation was commonly acknowledged by many respondents working at district hospitals. In fact, the work required them to become "multi-functioning" medical doctors and this affected specialisation. In addition, respondents also reported that they had not been given a day off after taking night shifts. Lack of time for rest indeed affects their health (Estryn-Behar, 2011). All these issues may have an impact on HW ability to work to professional standards and hence affect service quality provided (Chimwaza et al., 2014).

This problem is not restricted to district level HWs. CHWs also have to take the responsibility for many roles.

"At the CHCs, HWs in charge of MH also have to be involved in many other programs since each CHC has 5-7 HWs and is responsible for about 20 vertical programs. CHWs have the lowest qualifications but have to handle a huge amount of work. The RH program itself has many kinds of reports, statistics, exclusive of 20 other vertical programs".

Provincial level _Administrator_5

Theoretically, there is no concrete evidence showing the ideal or maximum number of CHCs tasks that ensure the highest level of productivity (Jaskiewicz &

Tulenko, 2012) but in practice, CHCs are designed to implement a wide range of vertical programs and services. National vertical programmes have been reported to place demands on HWs such as writing reports, filling in forms (as discussed in the previous chapter), and attending meetings (World Health Organisation, 2006). Results of this study are consistent with a previous study's findings that CHWs often become "overwhelmed by a very broad range of tasks with negative effects on the overall quality of their performance" (Jaskiewicz & Tulenko, 2012).

Increasing frequency of night shift rostering

The most visible type of extra load is the frequency of night shifts reported by HWs at the both district and commune levels. CHWs reported that they had very dense night shift rostering.

"If you work at a district level, you will have one day off after your night shift. But at CHC, I worked last night but I have to work all day today. Shift rostering in CHC is often more frequent compared to the district hospital although we do not have patients in most of the time. In my CHC, we have night shift every two days since currently one HW is studying and one other HW is on maternity leave".

Commune level _Staff_4

One respondent reported that she had experienced such a frequent night shift schedule that she was fearful whenever she recalled it.

"Some months ago before I was taken off the night shift rostering list, I had 15 night shifts a month, since only one colleague of mine and myself were in charge of the obstetric night shifts. The other medical doctor who just started working here had a baby younger than 12 months, so she did not have to take night shifts. Taking 15 night shifts per month, I felt very panicky. I often shared with my leaders that when taking night shifts, apart from work pressure and being responsible to patients, we also are under pressure from patients' relatives and patients themselves, for example, when a pregnant woman has labour pain. We also have pressure from our family".

District level _Manager_6

From a management perspective, what this respondent shared is a concern. Critical shortages of MH workers and extra workloads were major factors in causing

HWs to seriously contemplate leaving their jobs, as reported by a study in Malawi (Chimwaza et al., 2014). The organisation of tasks affects the motivation of HWs, and in turn impacts on HW performance and the quality of services provided.

According to many respondents, working night shifts is often more challenging since many district hospitals assign only one medical doctor to all after hours cover, due to the lack of medical doctors. This result mirrors the finding of a study in Malawi that reported difficulties of HWs including not having anyone to help them as result of an overwhelming lack of HWs (Chimwaza et al., 2014). The staff shortages evidently place more responsibility on other existing HWs.

"In one night shift at our hospital there is only one medical doctor but we have to handle all the things, include processing to admit patients at night, doing examinations and treatment, or handling emergency cases, very hard to manage".

District level_Staff_1

Although aware that the medical career is by its nature risky and demanding, one respondent in Bac Giang province still expressed dissatisfaction with the current night shift rostering, claiming that it was so frequent that it could t affect their health.

"To be honest, our work is very strenuous. Daily exposure to blood and pus, and risk of getting diseases is high. In addition, we spend a wakeful night on night shifts. The night shift rostering is so frequent, it might be 5, 6 nights but can be up to 10 nights per month if one HW is on leave. That means two nights at home and one night at work. If this schedule continues, we will be extremely tired, because there will no time for us to recuperate our health".

District level _Staff_2

The duties during night shifts in CHCs might not be as heavy as in district hospitals since there are fewer patients using the services (Witter et al., 2011). However, concerns raised by respondents included that the frequent night duty was coupled with unsatisfactory allowances, and especially affected female HWs since they were expected to take care of their families.

"I do not like to have frequent night shifts because I have to leave my children at home. We are women, you know. We do not want to work at night, while the

allowance is very low. My children are still small and need to be cared for and supervised".

Commune level _Staff_2

This statement echoed concerns made by district manager 6 who experienced pressure from her family about her continuous schedule of night shifts. The role of HWs with night shifts and being on call affects health workers' families, particularly when HWs are females who take the main role in caring for the family. This situation was similar to the Papua New Guinean context where HWs were under too much pressure from work and family at the same time (Razee et al., 2012).

9.2.4.2 Staffing shortages as a cause of work-related stress

Peterson (2008) noted that "Work-related stress arises where work demands of various types and combinations exceed the person's capacity and capability to cope". At health facilities that have staff shortages, the existing HWs are saddled with an increased workload. Research conducted in Sweden confirmed that high job demands were closely associated with the exhaustion component of burnout, one expression of work-related stress (Peterson, 2008).

The extra workload caused by staff shortages was reported by district HWs as causing work stress since they always had to work under high pressure. This concern is supported by a recent systematic review showing that frequent night shifts were associated with many negative health issues (Merkus & Drongelen, 2012). For example, a respondent from a district hospital in Bac Giang mentioned that the frequent night shifts caused insomnia.

"Recently our hospital leader has been very concerned about the obstetric area, partly due to the increasing numbers of obstetric complications, so he requires us [obstetric department] to have an obstetric doctor on night duty instead of having a general medical doctor for the whole hospital as usual. But you know we are lacking obstetric doctors so the night shift duty is too frequent. I am so afraid of working at night. I have had insomnia for more than two months, you know, working the whole night but when I am home I also cannot sleep. This time I have to request to be exempt from taking night shift".

District level _Manager_6

The lack of clear work boundaries, and the lack of a sense of task completion also appears to be an important issue. One respondent described this as follows:

"Oh, I cannot count how much work I have to do. Work, heaps of work, just keeps continuing".

District level _Manager_9

Staff shortages at the district hospitals not only create an additional workload but also appear to result in concerns of HWs about being unsupported technically by colleagues. A literature review showed that the characteristics of the working environment, such as the competencies of co-workers, also have an impact on health workers (Traoré et al., 2014). The feeling of working alone without support from other colleagues is evident in the following comment from medical doctors from Lao Cai.

"When I do surgery, I am assisted by a general medical doctor without obstetric expertise, so sometimes I feel nervous. Luckily since I started working here there has not been any complication".

"In general we have many difficulties, it's scary. In fact, we just run risks but are very nervous. Let's imagine when you complete your course you have supervisors, qualified colleagues to ask for advice when you get stuck. But here I have no one to share and to learn from, so always work in fear".

District level _Manager_11

Similarly, the work of midwives in the CHCs and the Obstetrics Department of DHs was described as lonely, requiring long hours and with few possibilities for collegial support, even during obstetrical emergencies (Graner et al., 2010). Respondents reported that, due to staff shortages, many DHs assigned a general MD to take responsibility for the whole night shift. This meant that the midwife taking the night shift needed to be very active in the management of the patients in the Obstetrics Department, and he/she was less likely to receive much support from the general MD since he/she had little obstetrics expertise. Many respondents reported that their work had increased risks for patients and more stress because of the limited capacity of health facilities at the lower levels.

Moreover, a concern emerged that the increased volume of work was likely to be associated with an increased risk of a mistake or of care going wrong; "the more work one does, the more possibility she/he makes mistakes" (District level _Manager_6). This was demonstrated by the statement of one manager who was very worried about her current work as an obstetric doctor at a district hospital.

"I am aware that obstetric complications have been increasing, and I feel very nervous, all the time. So I really feel tense when going to work because we must try our best in order to mitigate the occurrence of complication or at least make sure we can manage it. When everything goes smoothly, we can go back home and sigh with relief. Our leaders always encourage us to try our best to overcome the difficulty, but who knows how long it will last?"

District level _Manager_6

In summary, staff shortages have a critical impact on HWs. In general, for almost all HWs, frequent night shifts with low supplementary allowances, high workload and the tensions, even fears they are facing in their daily work, negatively affect their motivation and potentially their performance.

9.2.4.3 Impact of the quality of supervision from district to CHCs

It is noted that the discussion about supervision that has already been described in Chapter 8 will be repeated in this part. However, while Chapter 8 explained the influence of governance-related factors on organisation of MH service delivery, including supervision, this section explores the impact of supervision on HW competencies, motivation and performance.

Staffing shortages in higher-level facilities also lead to poorer quality of supervision for clinical care in lower level facilities. The literature review indicated that the key challenges of supervision were supervisors' lack of supervisory skills, useful tools and difficult transportation to the field sites (Rowe et al., 2005). This can negatively impact on the purpose of improving HW performance through supportive supervision (Greenspan et al., 2013).

In general, the respondents working at the CHCs felt that the supportive supervision they received from the district level was helpful, as they could learn how to improve the services they provide. The supervision was conducted monthly or quarterly depending on the schedule of districts. Since the reforms in 2004, District

Hospitals, District Health Bureau and District Preventive Health Centres have been managed separately as covered in Chapters 5 and 8. Witter et al. (2011) noted that "this has reduced the supervision of the CHCs, which falls entirely on the district health bureau now (without the support of HWs at the hospital, for example)". In fact, a limited number of HWs at DHC now have to provide supervision for 15-20 communes, so the support is spread thinly as discussed in Chapter 8.

Currently in the MH network in both study provinces, the RH Department of the District Health Centre is responsible for supervising the RH services (including MH services) of CHCs. The competencies of district level HWs was a concern for respondents.

"Our health workforce do not have obstetrics expertise so they need some short training courses on MH areas. However, it is not as good as those who have obstetrics expertise. Therefore, we have a problem in supervision. They are at the district level and responsible to direct CHCs. If they have expertise, the technical supervision for CHCs must be better".

Provincial level _Administrator_3

Respondents were also worried that the district HWs with supervisory roles had lower qualifications and less experience than CHWs, since almost all heads of CHCs in Bac Giang were upgraded medical doctors and they were practising every day.

"Regarding the quantity of HWs in our department, I think it is fine for taking daily work but when we have a RH campaign, we lack HWs to implement it in the whole district. We have an issue of a low rate of medical doctors, just 10%. So the quality of services provided and of the supervision we provide for CHCs have not met the expectations. We are in charge of providing support and training for HWs from CHCs, so if our health workforce have high qualifications, I am sure the quality of supervision would be improved. You know, currently only few HWs have university degree qualifications".

District level _Manager_15

As most of heads and staff in the RH Department of the District Health Centre in Lao Cai were secondary midwives, they were not confident about their roles as supervisors for CHCs. In fact, HWs in RH Department of DHC were involved more

in administrative work such as planning and did not provide MH services and therefore they did not have current experience in the MH area.

"Q: How do you typically support CHCs in maternal health?

A: We cannot support them in maternal health.

Q: So, is there anything you can do to overcome this situation?

A: Our main solution is to organise training course for them, and our HWs have to improve their knowledge through reading and learning from others. We actually cannot supervise them in this area".

District level _Manager_18

On questioning, the supervision turned out to be mainly checking compliance with processes for CHCs' reports and records as required in the current reporting system. The amount of time supervisors spent at the CHCs, reflecting the lengthy travel requirements in remote and mountainous areas, was also seen as unsatisfactory.

"To be honest, I think supervision is not efficient. Because they just come to check our reports, to see if we can do some services or not and remind us that we need to do them. The support for the technical aspects is not efficient. When we ask about how to deal with some specific cases, we do not get an answer".

Commune level _Manager_2

"The District Health Centre has a checklist when they come to supervise us. For example, they ask if we can perform normal delivery and they tick the box. They do not tell us what should be cared for in attending a delivery or ask us what we need to be supported. Supervision is good, but it does not focus on our technical aspect practically".

Commune level _Staff_4

Indeed supervision can contribute to "will do" and "can do" aspects of HW motivation (Mathauer & Imhoff, 2006). It is generally recognised that if supervision is implemented correctly, "it could become a mechanism for providing professional development, improving HW job satisfaction, and increasing motivation" (Rowe et al., 2005). Otherwise, ineffective supervision contributes to low staff morale,

productivity and performance (Jaskiewicz & Tulenko, 2012; Stekelenburg, Kyanamina, & Wolffers, 2003).

In summary, the analysis of the interviews and aspects of the survey showed that three dimensions of human resource availability, namely HR establishment, HR qualification and HR expertise, all impacted HWs. The shortage of human resources either in quantity or professional qualifications negatively impacted on work load and work-related stress for HWs and also affected the quality of supervision, and thereby potentially quality and safety of services. This in turn had a negative impact on HW competencies, motivation and performance.

9.3 TRAINING OPPORTUNITIES

The research indicates that opportunities for training and upgrading skills are important factors affecting HW motivation (Dieleman et al., 2003; Dieleman et al., 2006; Kak et al., 2001). Training is defined as a factor that will "nurture health worker's personal objectives and their value" (Mathauer & Imhoff, 2006). In general, apart from pre-service education, in-service training is very important so HWs can upgrade their knowledge and improve competencies. The term "training" used in this section focuses on in-service training.

The survey found that MH workers had limited and variable access to training programs. Almost one third (32.8%) of participants reported no access to training in the preceding 12 months (Table 5.15, Chapter 5) and among the 176 MH workers who attended training course in the preceding 12 months, 15.9% did not attend training specific to MH and RH (Table 5.16, Chapter 5). Furthermore, a relatively high proportion of HWs were not trained in specific EOCs (Figures 6.1 and 6.2, Chapter 6). Reasons for this were explored in the interviews.

9.3.1 Organisation of training courses driven by budget availability not training needs

According to respondents, the main funding resource for RH in-service training comes from vertical program funding from the Ministry of Health. This program is called Project on RH and every year has a budget for the training of MH workers. The Provincial RH Centre is responsible for implementing this project, preparing a training plan at the beginning of each year which has to be approved by Maternal and Child Health Department in the MOH.

"With respect to re-training for the RH network, we mainly base it on the instructions of the vertical program. We do not have our own budget allocation for training, so we integrate with the RH program".

Provincial level _Administrator_3

In addition, in recent years both Bac Giang and Lao Cai have received funding from other projects. Bac Giang benefited from a 5-year project on Maternal Mortality Reduction funded by the Dutch government, which closed in 2012 and a GAVI (Global Alliance for Vaccines and Immunisation) funded project that started in 2010. Similarly, Lao Cai was also supported by a GAVI project and another project for border districts. These projects were considered the main source of funding for training of MH workers in both provinces.

As a result of budget limitations, the Provincial RH Centre which is supposed to take the initiative in planning and implementing in-service training for MH workers, seemed to be more "responsive" than "proactive". This planning role, however, was made harder because of budget unpredictability.

"In general, it totally depends on the training plan of the vertical program. For example, they set the target for my province that this year we should organise five training courses with 25 participants for each of those, and the content should focus on safe motherhood, newborn care, adolescents' RH and so on. We do not have our own plan for in-service training for our HWs".

Provincial level _Administrator_3

The budget limitations flowed through to the district health units. Since the autonomous Decree in 2006, district hospitals have been able to allocate an amount of their revenues for staff training based on their needs. District health centres, on the other hand, still depend on the state budget and therefore have to wait for the allocation from the provincial level and base their training on programs designed by the provincial level. The Provincial RH Centre often develops integrated training programs with aspects drawing on several projects, such as Safe Motherhood and Maternal Mortality Reduction. Therefore, training can be described as "project-driven" and the topics, content and plan may not help much to address specific knowledge or skills gaps of a district or a commune. Previous work on HW motivation in rural areas of Vietnam also found that most training was organised by

vertical programs (Dieleman et al., 2003). A similar situation was found in a study from African settings where the government identified a lack of specialist training for their MH workers and yet there were no standards for clinical training courses (FIGO Safe Motherhood and Newborn Health Committee, 2009).

9.3.2 Timing of training courses incompatible with work demands

At both district and commune levels, respondents reported problems with the timing of training courses making it difficult or impossible to attend.

"There might be a year when the disbursement was implemented late in that year, and then training courses were organised so frequently, they sometimes overlapped. We could not even attend all the courses. Because of the budget from the province for example, we do not have any money for training at this moment. But once the budget is approved, a variety of projects will conduct training courses. Our training target is commune and village HWs but other projects may also have a similar target. We have experienced such issues in the last few years".

District level _Manager_15

"They just open courses. In fact it has not been what we expect. They organise them and send the invitation to us, and then we must go".

District level _Manager_4

Consequently, respondents reported finding it hard to balance training and working time since most training courses were organised in the last quarter of the year, the period when CHWs are busier than usual with reports and completing other tasks.

"For example, they [provincial level] wait until the end of year to see if there is any money left, then they open the training course. So sometimes we are too busy to attend training".

District level _Manager_4

"When the end of year comes this is the time we go for training. To be frank, we have asked many times that training should be evenly organised throughout the year. We need to plan for work in our CHC".

Commune level _Manager_3

Due to budget unpredictability, the organisation of training courses was reported as incompatible with HW demand in terms of timing. To a certain extent, this way of organising training may fail to improve HW knowledge and skills since the participation rate can be low. Furthermore, the purpose of HRM to use training as a motivating factor cannot be achieved.

9.3.3 The relevance and usefulness of training courses relative to need

The survey results showed that some topics were either not included in training at all or had little mention in the training courses provided for respondents. From Tables 5.18 and 5.19 of Chapter 5, it can be seen that the most commonly perceived needed topics for training included management of obstetric complications, prenatal care, intra-partum and post-partum care, normal newborn and emergency care; and safe motherhood. According to the report of the Provincial RH Centre in Lao Cai in 2012, among the five training courses provided to MH workers, three courses focused on the RH area, namely maternal resuscitation, validation of maternal death and sexually transmitted diseases.

In the study provinces, although HWs at the commune and district levels had recently benefited from training associated with vertical programs and other foreign projects targeting basic RH knowledge, respondents claimed that the training content sometimes was not relevant to what they needed in practice.

One respondent shared her experience in attending a training course:

"...content of training course is very little and not intensive, because these courses are only one day or 2-3 days long. Participants only attend lectures, but do not get any practice. If the trainee really pays attention he can acquire some knowledge but if he does not, he gets nothing".

"The training content should include various topics, not only safe motherhood or newborn care in order to reduce complications at the grassroots level".

Commune level _Manager_2

As emphasised by one respondent, the content of current training has been developed for HWs generally but it needs a certain level of adjustment to the local conditions to ensure HWs can apply what they learn to their work place.

"There are some training curriculums that are quite good, but still some are very theoretical. Obviously, the level of awareness of HWs and their knowledge is not

high. There might be something not tailored to the local context if we just base it on the textbook. Training curriculums should be concise and appropriate for local people in terms of their competencies. We need to have training documents developed or adjusted appropriately for local conditions. Most of our HWs who have secondary degrees are local [ethnic] people, around 49% in our district".

District level _Manager_2

The suggestion regarding adaptation of training materials to local conditions was consistent with findings in a previous study (Dieleman et al., 2009). Adaptation possibly facilitates knowledge improvement and thus makes training for local HWs more effective.

9.3.4 Inadequate training methods

The literature review showed that while appropriate training content was important for increasing knowledge and skills and thus improving HW performance, it was not sufficient. Other factors needed to be considered such as using a participatory approach, adapting training materials to the local situations and practicing during or after training (Dieleman et al., 2009).

Almost all respondents reported that the current method of training was inappropriate, particularly for clinical training courses in the MH area. HWs stated that they actually needed to practice in real situations or needed hands-on training in order to learn clinical skills that made them confident enough to perform.

"I think it would be much better if we can provide HWs with training by practice. Now short courses from 3-5 days only give them theory, they learn by imitation, they have no practice".

Provincial level _Administrator_3

Previous studies indicated that better performance after training can only be achieved with proper supervision (Dieleman et al., 2009). In this study, respondents stated that the evaluation of the training outcomes was either not undertaken or inadequate. The evaluation was confined to testing the knowledge of participants after the training rather than checking that participants could perform the new skills confidently.

"I think we need to assess trainees. Only if they master new skills can we let them back into their work areas and perform. For example, it needs to set out how many

cases of delivery they should attend, or whether they are skilful in cutting and suturing the perineum, or if they could actively manage the third labour stage and complications. It should not be stopped at the level of learning knowledge".

Provincial level _Administrator_4

It is true that clinical care training requires both theory and practice that helps participants gain new knowledge and confidence in performing new skills they have learnt. Moreover, in-service training not only affects HW confidence in their practice but also the community's confidence in HW competencies. The current method of training was perceived by respondents as inappropriate and ineffective in terms of improving HW competencies, motivation and performance.

In summary, in-service training is an essential HRM tool to improve HW performance, and quality of MH services. However, the findings of this research suggest it was not implemented properly in the study provinces. In order to have positive outcomes from training, various aspects of training could be improved including formal needs assessment (e.g. the relevance of training topic and content, time to organise training courses, material adaptation) and attention to the appropriateness of the training methods.

9.4 SALARIES AND SUPPLEMENTS

It is generally acknowledged that financial incentives, including salaries, supplements, benefits and allowances, are crucial factors for HW competencies, motivation and performance (Dieleman & Harnmeijer, 2006; Henderson & Tulloch, 2008). However, opinions differ on the relative importance of financial incentives for HW motivation (Chandler et al., 2009). While some researchers have argued that in low resource settings, non-financial incentives are more important, such as recognition, achievement (Mathauer & Imhoff, 2006) or support from families (Greenspan et al., 2013), others confirmed that low salary resulted in low HW motivation (Ferrinho, Van Lerberghe, Froanteria, Hipolito and Biscaia, 2004 cited by Chandler et al., 2009). However, much research has identified "low salaries as a major reason for job dissatisfaction and/or migration among health workers" (Henderson & Tulloch, 2008). A report from the World Health Organisation (2006) also indicated that remuneration is one important component of support system-related levers influencing dimensions of HW performance. This section aims to

describe HW perspectives on their salaries and supplements, and the influence of current financial incentives on their motivation and performance.

9.4.1 Inadequate basic salary for health workers

In Vietnam, workers in all fields, including health, are paid under the government system which establishes a salary schedule. In this schedule, "minimum salary" is used as the basis for calculating the salaries of workers with different coefficients depending on qualifications, seniority, position and work experience. The minimum salary is defined as the wage paid to workers performing the simplest tasks in normal working conditions (Bales, 2008). In recent years, the minimum salary has been adjusted in accordance with economic growth, the consumer price index and labour supply and demand in different periods. Over the period of 5 years from 2008 to 2013, the minimum salary has risen from 540,000 VND to 1,150,000 VND (Vietnamese Government, 2013).

Despite the increase in the minimum salary level in recent years, respondents from commune to provincial levels acknowledged that the current salary level of a HW was very low and was insufficient to meet the basic needs of HWs and their families.

"Another thing is the living standard of our HWs at district and commune levels are very low, the salary is very low. With such low salaries, they can hardly support their family and assure their survival".

District level_Manager_4

District hospitals are fee-collecting state health service facilities. Revenues come from state budget allocations, health insurance and patient user fee payments according to Decree 43 on financial autonomy (Vietnamese Government, 2006). The salaries of state HWs are paid out of these revenues. On top of their basic salary, those HWs who work in DHs receive additional income if they accomplish their tasks and do not violate hospital regulations. The additional income share in DHs varies depending on the revenues that hospitals generate from their service provision, and therefore depends on the "attractiveness" to patients. The additional income in surveyed district hospitals was reported as less than one million VND per month for each HW. Despite the additional income, respondents in the DHs reported that their

incomes were not sufficient for their family since there were many things they had to provide for their children, including milk and education fees.

The DHCs have less potential to generate revenue for preventive services. Unlike DHs, DHCs are mainly responsible for vertical programs and the state budget covers the full salary and supplements for preventive medicine workers according to regulation (Vietnamese Ministry of Finance, 2007). The result is that, HWs who are working in preventive medicine have little opportunities for additional income. One respondent shared:

"My salary is the highest here since I am a manager, but it is just over 5 million VND. The total income of those people who have secondary degrees and are at the lowest level in the salary schedule is about 3 million VND. That salary is very low if we compare it with the common level of salary. And we also have children, and have to pay for their education. Our preventive medicine does not have anything, only curative sector has additional income. Moreover, allowances are also low. We are eligible for 40% of allowance, as high as curative HWs. Almost all our HWs do not have extra work, do not have clinics, no other things. So we do not have anything else other than our official salary".

District level_Manager_15

Similarly, CHWs are paid by state budget allocation through the local People's Committee. CHCs are reported as less attractive to patients because of their limited physical capabilities, and consequently CHCs also cannot generate revenue from services. HWs therefore have no other sources on top of their salary which includes a 40% occupational supplement calculated on the basic salary.

"The salary is very low, you know. Most of our patients at CHCs are insured patients and we do not provide additional services. Rooms and medical equipment are limited, we do not even have enough rooms. In addition, we can hardly develop services here because patients tend to search for more reliable facility [at higher levels]. So we just have our salary".

Commune level _Manager_3

One CHC midwife with 19 years of work experience expressed concern about her current salary, reporting that it covered only two weeks of expenditure in her family:

"The total of my salary and occupational allowance is around 4.7 million VND. This is sufficient for me alone, but I have children. Living conditions are very difficult at this time. My children are little now, but when they grow up and study at university, I do not know how I can earn money to support them".

Commune level _Staff_2

These concerns were confirmed by a provincial respondent:

"Yes, CHCs mostly do not have additional income. In those districts where there are many poor people [some districts have 95%-97% of poor insured patients], revenue from user fee payments is likely very little. Preventive medicine is totally based on the state budget".

Provincial level _Administrator_2

In summary, this section found that the current salaries of HWs were perceived as low and insufficient to meet the basic needs of HWs and their families. The next section will explore how HWs perceive their salaries and supplements from a different aspect.

9.4.2 Basic salary and supplements are perceived as not commensurate to qualifications and effort of health workers

As described earlier, there is one salary schedule for workers regardless of specialisation. Those workers who have equal qualifications are placed on the same level. On top of that, there are supplemental components to reward higher qualifications or greater seniority, and to compensate HWs working in remote areas or doing dangerous, harmful work such as night shifts or working with infectious disease patients.

The current salary schedule in Vietnam does not take into account the ethos of the profession and the education time of several sectors. For example, a medical doctor completing a six-year training course receives the same starting salary as someone who studies for four years in another sector. There is no recognition of the fact that HWs experience daily stress because they are responsible for the survival of patients and are frequently exposed to high risks (Vietnamese Ministry of Health and Health Strategy and Policy Institute, 2011).

Moreover, the healthcare sector needs experienced HWs, but the health sector still has not provided any supplement for seniority.

"In general my salary is lower than those who study in other sectors. For example, a person with 19 years' experience in education must have a very high salary".

Commune level _Staff_2

However, it is government policy to compensate HWs working in disadvantaged locals or near border areas. HWs working in these areas receive additional supplements for "highland areas" or "border areas". This could mean that the income of a secondary midwife with ten years' experience can be more than 6 million VND, much higher than a medical doctor with 14 years' experience in a lower land facility (about 4.5 million VND). Decree 64/2009/NĐ-CP (Vietnamese Government, 2009) regulated supplemental payments for public HWs in disadvantaged areas with difficult living conditions. While this decree showed positive impacts in terms of attracting and retaining HWs in extremely disadvantaged areas, the policy's coverage was relatively limited (only 2,112 communes in 62 extremely disadvantaged districts of 11,112 communes nationwide) (Vietnamese Ministry of Health and Health Partnership Group, 2013).

Presently, there are several types of supplements provided for HWs. However, for the convenience of discussion, this study will focus on two types of supplements that were frequently mentioned by respondents in the study locations. The first supplement is special health occupational supplements which are regulated by Decree No. 56/2011/ND-CP of the Government on occupation-based incentives for workers in public health facilities dated 4/7/2011; and Joint Circular No. 02/2012/TTLT-BYT-BNV-BTC which guides the implementation of the Decree (Vietnamese Government, 2011).

Decree 56 regulated the level of a supplement to a range from 30 to 70% of the minimum salary depending on the characteristics of the health worker's job. For example, those HWs working directly with HIV/AIDS patients are eligible to achieve a 70% supplement level while the managers who are not involved with examination and treatment of patients receive a 30% supplement level. However, this regulation has encountered difficulty in relation to classifying HWs at the district and commune levels, who in reality have to perform multiple tasks due to the shortage of

HWs (Vietnamese Ministry of Health and Health Partnership Group, 2013). Furthermore, although this decree was issued in order to ensure effectiveness of the implementation of policies on attracting and retaining the health workforce, the supplemental amount was perceived to be insufficient according to respondents.

"In general, the requirement from health sectors is very high, but payment is low. Currently, I have to say that the payment is not commensurate to the effort of HWs. Although Decree 56 aims to pay an occupational allowance, the amount is not worth considering. Payment for HWs is low, so I think it might be unreasonable if we require too much from them".

District level _Manager_12

It was noted by Fritzen (2007) that little chance to practice, few training opportunities, poor career development and promotion opportunities led to the feeling of being 'stuck', particularly in the context where the official salaries could cover only a part of HW needs. As a result, the HW felt they had little to gain from working hard or being responsive to their clients or supervisors. Deficits in these factors on the one hand influenced HW motivation, and on the other hand created difficulties for managers in managing HR performance.

The second type of supplement mentioned by respondents in this study were the supplements for on-call duty (including night shifts), epidemics prevention and direct involvement in surgery as regulated by Decision 73/2011/QD-TTg (Vietnamese Prime Minister, 2011). In Lao Cai, the new scheme for night shift payment was applied several months after Decision 73 took effect in 2012. However, until 2013 many CHWs in the Bac Giang province still had been paid according to Decision 155/2003/QĐ-TTg (the former supplemental policy). Thus, instead of receiving 25,000 VND for a night shift, they received only 10,000 VND in the first quarter of 2013. According to Decision 155/2003/QĐ-TT, the level of the supplemental payment per HW per shift should range from 10,000 VND at the CHC to 25,000 VND at the 3rd rank hospitals, 35,000 VND at 2nd rank and 45,000 VND at the highest level facilities. Workers working a 24-hour shift should also be entitled to rest the day after their 24-hour shift without any reduction in pay.

Respondents from Bac Giang shared:

"We hope that the allowance for night shifts will be increased. Working at CHC, we have night shift every two days, but the allowance is only 10,000 per working day, 13,000 for weekends and 18,000 for public holidays. So we really hope to have more allowance. In 2012 we heard about this news from the television and from colleagues that the supplemental payment for night shift will be 25,000 plus 15,000 for a mean but there has not been any change so far".

Commune level_Staff_4

"Allowance for night shift should be increased in order to recognise our effort. Let's calculate, the daily wage of a handy man without a high education background is approximately 150,000 VND. You see, they do not need to study but they can earn such a large amount of money. The authority should consider this issue".

Commune level _Staff_2

In summary, several kinds of supplemental payments for HWs have been implemented, including supplements for those HWs working in disadvantaged areas and in dangerous and harmful jobs. However, it was universally acknowledged by respondents that these supplements were not commensurate to the qualifications and effort that HWs devote to the health systems. This created dissatisfaction among HWs and led to low motivation.

9.4.3 How do low salaries and unsatisfactory supplements affect the motivation and performance of health workers?

It is evident that low salaries and unsatisfactory supplements influence HW motivation, particularly in low resource settings. Previous studies have indicated that salaries and supplements, coupled with other factors such as working conditions, supervision and training opportunities, are very important (Henderson & Tulloch, 2008). According to The World Health Organisation (2006) underpayment and a sense of unfair differences stunt productivity and performance of HWs and this leads to a variety of strategies for coping with low salaries, such as absence from work, income maximisation (e.g. by taking dual jobs) or migration to better areas. The influence of financial issues on the health workforce is described in Figure 9.3.

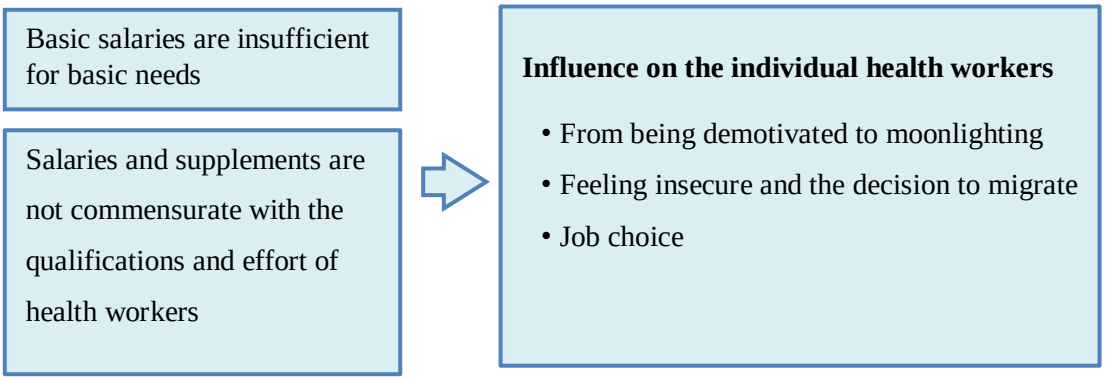


Figure 9.3 Influence of salaries and supplements on health workers

9.4.3.1. From being demotivated to moonlighting

Paying incentives was found to increase HW motivation and performance (Dieleman et al., 2009). Respondents in this study stated that income was an important motivating factor for HWs.

"Those hospitals that have higher incomes can encourage HWs to work better and more enthusiastically".

District level _Staff_1

This respondent echoed the view of district manager 12 who reported that low salaries and supplements affected the morale and motivation of HWs.

Research in Tanzania found that extra duties resulted in a lower motivation score among clinicians who did not receive an extra payment (Chandler et al., 2009). In the current study in Vietnam, one manager acknowledged that since his facility had staff shortages and the budget was highly limited, he had to encourage all HWs to work extra hours and receive half of their payment for extra work. One respondent who worked additional hours reported feeling dissatisfied about compensation for her extra work.

"Today I have night shift again, working hard all day and then continue with night shift, no rest at all. Here you work for an extra 8 hours but you are paid for only 4 hours".

District level _Manager_11

Literature has highlighted salaries as a factor of the lower-level needs or basic needs (Franco et al., 2002). When health workers' salaries are insufficient for their

basic needs, they may have to find ways to get additional income to support themselves and their families. Having dual jobs is a coping strategy that was acknowledged by some respondents when discussing concern about low salaries and unsatisfactory supplements. It is obvious that once HWs start performing in dual jobs, they are less likely to devote their time and their effort to the current job they are doing.

"Because salaries and income are low, they have to take dual jobs (extra job at home or in other clinics). Secondly, they work less enthusiastically and responsively".

District level _Manager_4

9.4.3.2. Feeling insecure and the decision to migrate

Inappropriate salaries and income issues are considered common concerns in many developing countries. In Mali, incentives in housing, and transportation were found to be effective only among the lower cadres, but not among medical doctors and nurses (Lodenstein E. & Dao D., 2011). A district manager in the current study expressed his concern when discussing salaries and income issues and confirmed that low incomes at CHCs were a major cause of some HWs migrating to other facilities.

"Concerning the health workforce, the biggest issue is that HWs do not feel secure working at CHCs. Being educated and trained equally as others, they do not want to work at CHCs due to the low income. Those who have an opportunity to have further training will move to work in other facilities. Well it's because of low income".

District level _Manager_16

Firstly, it is common for HWs to migrate from preventive medicine to the curative sector. While financial incentives alone would not keep HWs from migrating to other countries or big cities (Willis-Shattuck et al., 2008; Witter et al., 2011), they encourage HWs to move to other facilities within the same location. Respondents from our field study confirmed that the difference in salary and additional income between the curative and preventive medicine sectors was the main reason that HWs wanted to move to work in district hospitals. As described in 9.4.2 of this chapter and Chapter 2, district hospitals have more opportunities to generate revenues than district health centres and CHCs, so they have more power to attract HWs.

"Hospitals often have more revenue so they pay their staff more. For example, they have a higher additional income. That is definitely the reason why medical doctors do not want to work at preventive medicine centres, and only like to work in hospitals".

Provincial level _Administrator_1

Secondly, HWs tend to move to work in higher-level facilities. Previous studies showed that one factor affecting staff shifting to big cities was the disparity of salary and income between regions (Health Strategy and Policy Institute, 2010; Witter et al., 2011). In many cases, posts in remote areas are used mainly as a bridge for working in the government, preferably in urban areas (Lodenstein E. & Dao D., 2011). In this study, respondents also confirmed the increasing trend of migration of HWs to the central level.

"The first reason is low income. For example, the income of a medical doctor working in Hanoi [the capital of Vietnam] is higher than the income of doctors working in provinces or districts so they flock into Hanoi to work. Currently, the private health sector also attracts upgraded medical doctors [who are upgrading from an assistant doctor degree after four additional training courses] because they can pay them less than regular medical doctors [who need six years of medical training].

Central level _Administrator_1

As mentioned earlier, the Government has a policy to compensate those HWs working in disadvantaged locals or near border areas, regulated by Decree 64/2009/NĐ-CP (Vietnamese Government, 2009). One question that deserves discussion is whether the Government's special supplemental schedule for HWs in mountainous areas could attract HWs. Literature has shown that together with the working environment, living conditions have a strong influence on job satisfaction (Henderson & Tulloch, 2008). To some extent, some of the factors such as lighting, clean water, sanitation, transportation and infrastructure influence both working and living conditions and therefore are major causes for HW dissatisfaction.

A respondent explained that for many medical doctors, their income might not be the main reason for their migration but instead it could be the living conditions in the location.

"The salary and supplements policy for HWs in high land is very good. For example, in Simacai [a district of Lao Cai], the income of a district hospital leader is more than 10 million VND since their occupational and regional supplements are very high. This income definitely can provide for their life. But they want to have a better living condition. For the HWs, when they move to better living conditions, the official income paid by government can be low but they still have the chances to work in another job in the private sector with higher payment".

Provincial level _Administrator_2

This finding was reinforced by the result of a previous study conducted in Vietnam in 2011 which found that the disparity of salaries between regions was not the main reason for HW migration (Witter et al., 2011). The working environment and living conditions also played key roles in HWs making decisions to relocate.

9.4.3.3. Job choice

A study conducted in Tanzania showed that the reality of low perceived payments, together with difficult working conditions and poor relationships with patients, was translated by non-physician cadres as "not being respected" (Chandler et al., 2009). A previous study conducted in Vietnam also indicated that social recognition and respect were cited by medical doctors as important reasons for joining the profession (Witter et al., 2011).

Job choice, reflected by the question "I would recommend to my children that they become a clinical officer" also contributes to the internal motivation domain, as reported by Chandler et al. (2009). In the current study, when asked the question "Would you recommend that your children and relatives study medicine?" a respondent who was a midwife hesitated to answer this question but instead referred to the low salaries of the health sector.

"Many times I tell my children what kind of occupation to choose in future. Well, working in the health sector is very hard and the salaries and income are not commensurate to your work".

Commune level _Staff_2

Other respondents considered their current job as a responsibility that needed to be done, but they did not like their job. For example, one respondent mentioned that she could earn more money if she worked in a private clinic.

"To say the truth, I do not like my job very much. I am a medical doctor, so I just do my job, but I do not like it, because it is very hard compared to other jobs. In fact, I have been doing this job for many years, so I just keep doing it. As you know, being a medical doctor, you can earn several hundred thousand VND a day. But working in this job, it means attending meetings in the morning, and having a stack of documents waiting for you to be processed in the afternoon. It is harder".

Provincial level_Administrator_5

This finding is in line with the previous study's result that low salaries and incomes were found to be de-motivating factors since HWs felt that their qualifications and effort were not properly valued (Willis-Shattuck et al., 2008). In addition, HWs in mountainous and disadvantaged areas do not have many opportunities to improve their skills due to a number of reasons, including low service utilisation (mentioned in Chapter 7) and the lack of medical equipment, as discussed in the next section.

9.5 HEALTH FACILITY INFRASTRUCTURE AND RESOURCE AVAILABILITY

Health facility infrastructure and resource availability are components of working conditions (Rowe et al., 2005). Health facility infrastructure and resource availability were mentioned in previous research as an important motivating factor in the health sector in general (Chen et al., 2004; Willis-Shattuck et al., 2008) and in MH in particular (Parkhurst et al., 2005). Although numerous studies have examined the determinants of HW competencies, motivation and performance, little is known about how health facility infrastructure affects the HWs working in them (Rechel, Buchan, & McKee, 2009) and how replenishment of medical equipment and drugs influence HW performance.

9.5.1 Inadequacy of health facility buildings at the district level

Despite the few respondents who were quite optimistic as to the functionality of their buildings, respondents generally acknowledged inadequacies in facility buildings. One head of an Obstetrics Department described her department room:

"In fact our hospital infrastructure is very small. Our obstetric department is allocated 25 beds but we do not have enough space. And the staff room, with 14 people share only this small room. Please have a look at this room; you can see many clothes and individual properties. We keep requesting individual cabinets but do not know where the request gets stuck so yet we have not got it. So you see, there are a dozen staff in this room, so cramped and difficult, and the patient rooms are also not sufficient".

District level_Manager_6

Apart from individual working space, other respondents also mentioned the inadequacy of space for handling daily work.

"Our obstetric department wants to have an infant corner in order to monitor infants who are at risk, such as those with birth asphyxia, preterm infants or infants born in prolonged labour cases. In practice not all cases can be transferred to the paediatric department".

District level _Manager_9

One district manager was concerned about his centre's infrastructure and mentioned it as a barrier to service provision and development for the centre.

"We have only 210 square meters including toilets. We have to arrange three departments in a room so it is very cramped. The working space is so difficult, so we cannot think of the development of technical services. However, we are even better than some other district health centres that do not have their own building. So if you want to equip machines you need to have enough space and room, or what can you do?"

District level _Manager_13

The infrastructure conditions in some other district health centres (DHC) were even worse. In the past, former DHCs used to have both curative and preventive functions. Since Decree 172 took effect in 2004 (Vietnamese Government, 2004), DHC was split into the District Hospital, District Health Preventive Medicine Centres and the District Health Bureau (as described in Chapter 1). The Preventive Medicine Centres recently changed their name to District Health Centres but in fact, their main function is the preventive medicine area. Recent reports in Vietnam have

acknowledged that investment into preventive medicine should be paid more attention (Vietnamese Ministry of Health and Health Partnership Group, 2009; Vietnamese Ministry of Health and Health Partnership Group, 2012).

There are still some DHCs that do not currently have an office building despite having split from the DH long ago. One respondent explained:

"Years ago, the district health centre and the district hospital were one. After the separation, the district health centre was not provided with a new building so my RH department still stays with the hospital. After nearly 10 years, now the hospital needs to have more rooms for development. They have taken these rooms back so we have to ask the nursery school to stay in some months".

District level _Manager_15

During the discussion, this respondent expressed concern about their situation since they did not know where they would be working and for how long.

"Q: How long have you been working in nursery school?

A: 4 or 5 months.

Q: Do you know when they will take these rooms back?

A: in June this year [that is just 2 months from the interview time].

Q: So where do you intend to move?

A: I am not sure. But if our voice is heard hopefully they would invest money into building infrastructure for the district health centre. Not only in this DHC, but there are several DHCs facing a similar situation. Well, working there [in some rooms of nursery school] we never can meet the standards on services. Because we have just been there for a short time so we cannot build more rooms. There should be investment into infrastructure for the preventive medical area so that HWs keep their minds on their work. You know, we are always on the move so we cannot guarantee infection control".

According to Herzberg, Mausner and Snyderman (1959) cited by Franco et al. (2002), facility infrastructure is one of the hygiene factors (see Chapter 3), which by their absence or presence, determine levels of worker dissatisfaction. Respondents suggested that their current buildings were either too cramped or did not meet work

requirements, and this affected their working life. On top of that, the situation caused instability, particularly for those HWs who did not have their own office building.

9.5.2 Inappropriate design of building of Commune Health Centre

Except for one surveyed district in Bac Giang that had just invested in rebuilding 10 Commune Health Centres (CHC) following the new standards for CHCs, many respondents in other districts in both provinces mentioned the inadequacy of CHC building design for services provision at the commune level.

"Our CHC was established in 1997. It was built after the pattern of the population centre in the past. It has total of 6 rooms but all rooms share one door and now have been downgraded. Although it is very small, we must reserve two rooms for patients, one room for maternal services and another room for dispensing medicine and also for staff to stay in during night shifts. The common room outside is used for consulting and examination".

Commune level _Manager_2

All CHC buildings in the past were funded from local budgets. Commune People's Committees were responsible for the whole process, including the design. At least three issues were raised by respondents. Firstly, many CHCs did not have enough rooms for RH services according to the standards. It was reported that many buildings did not meet the National Guidelines (NG) for CHCs issued in 2012 in terms of the numbers of room and the design of service rooms. According to the national guidelines, each CHC should have six separate rooms (or in some circumstances at least four rooms) for RH care (gynaecological examination, family planning services, delivery and patient room). However, most respondents in both provinces complained that their CHCs did not meet the standards for RH care.

"The development of services is not consistent with NG since we lack rooms and have a limited source of medical equipment. Both our current infrastructure and medical equipment are very poor. We have a limited number of rooms. Our CHC was designed by the Commune People's Committee in the past and they did not follow any pattern for the CHC. Therefore, the building of the CHC depended on the budget of each commune and on the person who was in charge of the construction work. But it did not follow any pattern".

Commune level_Manager_3

Secondly, the shortage of service rooms at CHCs was reported to lead to room sharing in most CHCs and it may have caused cross contamination. As the result of cramped infrastructure, not many CHCs had the required six separate rooms or the minimum four rooms for RH care as defined in the National Guidelines on Reproductive Health (Vietnamese Ministry of Health, 2009). Therefore many RH services had to be shared in one room.

"The delivery attendance, gynaecology examination and family planning services have shared one room for a long time and it has caused cross infection from gynaecological patients to women who came to give birth or use family planning services. Now there is a need to separate these rooms".

Commune level _Manager_2, District level _Manager_14

This fact has caused concern for CHWs about the safety of clients who come to use services in CHCs.

"It affects us more or less. For example, we use one room both for delivery and for gynaecological examinations. It involves a sterilisation process. How can we ensure infection control?"

Commune level _Staff_2

These qualitative results were consistent with a recent survey conducted by the Department of Maternal and Child Health, Ministry of Health (Vietnamese Ministry of Health, 2011a). On average, each CHC in Vietnam has around 9 rooms, in which three rooms are used for RH services. RH services are among the most important of the primary healthcare services and thus need to be paid attention to at the grassroots and district levels. However, it was reported that 3.1% of CHCs did not have any rooms set aside for RH use. For those CHCs that had rooms for RH, the average number of rooms available was only 2.7 while it should have been 4-6 rooms according to the National Guidelines for RH. The detailed results are presented in Figure 9.4.

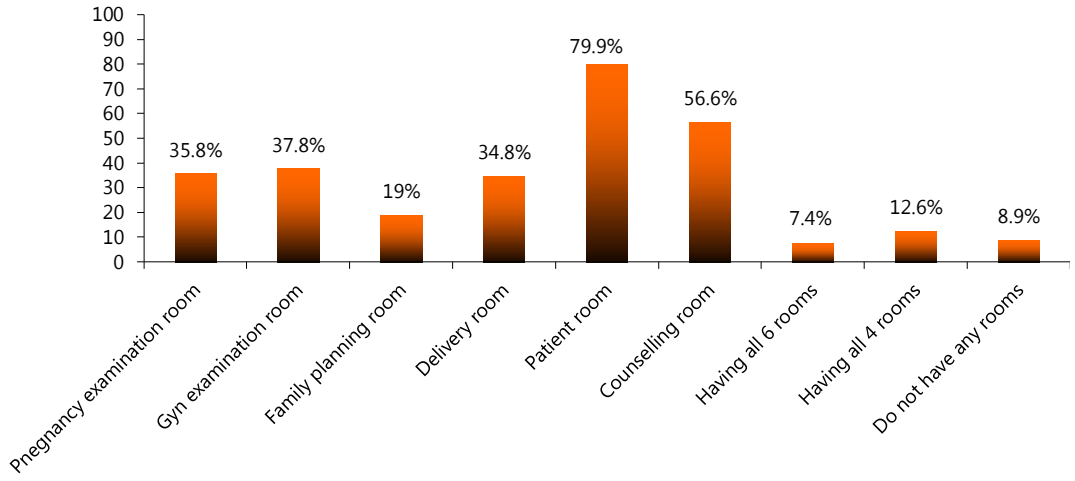


Figure 9.4 The proportion of CHCs that have separate service rooms for RH
Source: (Vietnamese Ministry of Health, 2011a)

Gynecological examination, delivery and family planning are the three main rooms within RH services that need to be separated. Figure 9.4 shows that the proportion of CHCs that had separate rooms for these services were not high, only 37.8%, 34.8% and 19.0% respectively. Only 12.6% of CHCs had all four rooms which met the NG for RH and the proportion of CHCs that had all six rooms was much lower.

Thirdly, inappropriate CHC buildings also resulted in small working spaces that made CHWs feel dissatisfied.

"*...the second thing is the working conditions. Working in a cramped house, our HWs always claim that we can easily bump into each other when we go in or out. It is so small that we cannot do anything. Since even the individual working place is not sufficient enough, it partly decreases staff morale".*

Commune level _Manager_2

In summary, insufficient numbers of rooms for RH services due to inappropriate design of buildings was reportedly common in many CHCs. This affects the "can do" side of HW motivation since HWs feel unsupported and not confident to perform what they are supposed to do. It also leads to a lack of safety for clients and influences the quality of MH services provided at the commune level.

9.5.3 Clean water and hygiene conditions at CHCs

The Ministry of Health has concluded that while the grassroots networks have been consolidated, the investment in grassroots health systems remains limited and in 100% of CHCs are hence inadequate to meet requirements for infrastructure, human resources, medical equipment and even for basic conditions like clean water and sanitation (Vietnamese Ministry of Health and Health Partnership Group, 2012). A challenge for such health facilities in high mountainous areas is that even if the CHC has a new building and medical equipment, if the building is located on a hill it may lack a clean water supply.

Respondents in Lao Cai province reported that electricity was available at almost all CHCs but clean water was infrequently supplied. In some CHCs, HWs had to fetch clean water for cooking by hand from the foot of a hill far from the CHC. There was also not enough clean water for bathing and washing, so it was difficult to handle a delivery. The issue of clean water and sanitation was mentioned by many respondents in Lao Cai communes, where most of the CHCs were located in high mountainous areas.

"We have a new building; our CHC was established in 2008 so it is quite new. However, our CHC does not meet the requirements of the National Guidelines because we are lacking clean water. We have to share one water source through a small pipe with the Commune People's Committee and the local school. If there is a delivery, we have to go to fetch water by hand. If the woman's relatives are not here, we obviously have to go to get water".

Commune level _Staff_1

Lack of clean water in the mountainous areas was perceived as having reduced the utilisation of MH services, one respondent noting:

"At my CHC, there is not enough clean water. We do not have running water at our CHC. Sometimes we have to catch the rain water for drinking or we have to go the nearest stream that is 1 km away. To be honest, if a pregnant woman comes to give birth, we do not have water for sanitation".

Commune level _Manager_1

This finding mirrors the results of previous studies. For example, a study conducted in five African countries examining barriers to providing emergency and surgical care found that less than 65% of hospitals (district to national levels) had basic infrastructure components such as electricity or water supply. The availability of basic infrastructure was even much lower in other health facilities, ranging from 7% to 35% (Hsia, Mbembati, Macfarlane, & Kruk, 2012).

Although clean water was a pressing and urgent issue for CHCs in this district, the solution provided by local authorities appeared largely ineffective.

"We reported many times, and every year the District People's Committee provides plastic or rubbery pipe to bring water to the CHC. The pipe is normally of an average length of 20-30 meters but there are some places that need pipe of a couple of hundred of meters to go across several hills. The plastic pipe over the hills might be ruined due to buffalos and cows left unbridled during harvesting time".

District level _Manager_1

The issue of hygiene and clean water was not restricted to Lao Cai but was common in other high mountainous provinces. This was perceived as one obstacle to MH service utilisation and provision, and the main reason that most of the CHCs did not comply with national guidelines. More importantly, the issue of poor working conditions affected HW morale and caused job dissatisfaction, which eventually lowered HW motivation and performance.

9.5.4 Lack of drugs and medical equipment

9.5.4.1. Lack of drugs for EOCs in CHCs

According to the National Guidelines of Reproductive Health (Vietnamese Ministry of Health, 2009) and technical assignment (Vietnamese Ministry of Health of Vietnam, 2001), *basic essential obstetric care* consists of five types of service at the communal level including 1) injection of antibiotic, 2) injection of oxytocin, 3) injection of anticonvulsants for pre-eclampsia and eclampsia (e.g. magnesium sulphate), 4) placenta removal/uterine checking in case of haemorrhage, and 5) normal delivery assistance (no uterine curettage for retained placentas). The next section will discuss the issues related to the availability of Magnesium Sulphate (which is used to treat pre-eclampsia and eclampsia) in the CHCs.

Lack of Magnesium Sulphate, the essential drug for EOC in pre-eclampsia and eclampsia

"Essential drugs are those that should be available at any time in sufficient quality, appropriate quantity, under condition of good production, storage and distribution, and safe use. According to NG of RH, there are 10 groups of essential drugs for the reproductive health area" (United Nations Population Fund, 2007a). A general statement acknowledged by most respondents in both provinces was that essential drugs for MH services were in serious shortage at CHCs.

"Currently 100% of CHCs do not have any Magnesium Sulphate in their emergency cupboard for use in the treatment of pre-eclampsia and eclampsia. They use Seduxen [a kind of sedative] for eclampsia. This is because of the regulation from the provincial department of health. So if CHWs know the symptoms of eclampsia, they will refer the woman to district hospital. It cannot be certain when eclampsia happens, during or post - delivery, but CHCs do not perform this service".

Provincial level _Administrator_4

Those essential drugs used for eclampsia and haemorrhage management were almost always unavailable in CHCs. Other essential drugs were provided but in limited quantity.

"Morphine and Magnesium Sulphate were not available. Essential drugs for MH are only Oxytocin and Papaverine in a small amount, but Oxytocin is very commonly used. We also have Methyldopa for treatment of hypertension, but the amount is even not sufficient".

Commune level _Manager_2

What was shared by respondents in both provinces was consistent with the results of a national survey (Vietnamese Ministry of Health, 2011a) that Magnesium Sulphate (an important drug for the treatment of pre-eclampsia and eclampsia), was available in only 16.9% of surveyed CHCs. With regard to uterine contraction, Misoprostol was available in less than 10% of CHCs. However, more than 86.4% of CHCs had Oxytocin.

While it has been regulated an essential drug that should always be available in CHCs, the main reason for the unavailability of Magnesium Sulphate according to respondents was:

"The district hospital [who is responsible for providing drugs for CHCs] does not want to buy this drug since CHCs rarely use them. Very few cases of eclampsia happen in CHCs, and so supplied drugs are just in stock and expire".

Provincial level _Administrator_3, Provincial level _Administrator_4

Quantitative results showed that the lack of drugs and medical equipment was the second most common reason for not being able to perform EOCs (Figure 6.3 in Chapter 6). The findings from interviews confirmed this. The current situation was described as a vicious circle in which little or no service provision resulted in the unavailability of drugs, which in turn was an obstacle to service provision. Among other working conditions, lack of essential drugs partly demoralised HWs and lowered their motivation. The qualitative results of this study were in line with another report from African countries that found that continued unavailability of Magnesium Sulphate was considered an administrative barrier for those HWs who wished to improve services (FIGO Safe Motherhood and Newborn Health Committee, 2009).

9.5.4.2. Medical equipment for MH services

According to respondents in Bac Giang province, in recent years the MH network of the province has benefited from the Program of Population and Family planning in terms of medical equipment procurement. Every year the Program sets aside a budget for medical equipment for the MH area (e.g. 2013 budget was 500,000 million VND).

Heads of CHCs in Bac Giang province acknowledged that the RH program (which includes MH services) received great attention from the government and local authorities in terms of medical equipment. In general, CHCs in Bac Giang were provided with most instruments for RH services according to National Guidelines.

"Medical equipment for RH and MH receives the most investment. Currently we have the dry heat steriliser, complete sets for delivery, complete sets for gynaecology examination, and complete set for neonatal resuscitation".

Commune level _Manager _3, Commune level _Manager_4

However, the views of CHC midwives and obstetric/paediatric assistant doctors directly involved in MH practice on the supplies of medical equipment were different. They expressed the view that the majority of the instruments, though available in CHCs, were not present in sufficient quantities, and some of them were not in good condition. Some CHCs had not been provided with new instruments or equipment for several years.

"Currently, we do not have sufficient sets for delivery or cutting and suturing the perineum. For example, we only have two sets for delivery but both are too old. And one set for gynaecological examination was provided two years ago".

Commune level _Staff_4, Commune level _Staff_5

Apart from some instruments mentioned above, several midwives confirmed that their CHCs lacked essential medical equipment for performing their tasks, for example, those required for prenatal examination.

"Currently, equipment for ANC examination is very poor, neither ultrasound machine nor foetal Dopplers are available at our CHCs. We have only a sphygmomanometer".

Commune level _Staff_4

Like in Bac Giang, respondents in Lao Cai complained that CHCs did not receive much investment from the local authority in terms of infrastructure and medical equipment.

"Investment in the health sector in CHCs is very poor, both in infrastructure and medical equipment. There is not proper care. However, written documents also express the care and direction of the government and province in coming years for CHCs in terms of infrastructure and equipment. I hope in the future it would be better with better care and more investment".

District level _Manager_2

It was argued that the lack of medical equipment stemmed from the greatly limited budgets. One respondent explained the supply of medical equipment for CHCs.

"Although in recent years, the infrastructure in CHCs in Lao Cai province has been upgraded, it has not happened synchronously. Each year we set an amount of money to buy medical equipment for CHCs, but not all equipment. We have to set a priority, so only some CHCs were provided with new medical equipment".

Provincial level _Administrator_5

Answering the question "What are the things that aren't so good about your current work?", a respondent from a CHC in Lao Cai shared:

"A: Our place is lacking many things. We only have a procedure table for gynaecology examinations, and we do not have a delivery table and heating light.

Q: Why don't you ask for these things?

A: I requested them many times, but still have not got them".

Commune level _Staff_1

The situation in regards to medical equipment seemed better at the district level in both provinces. Respondents stated that medical equipment for the obstetric department of district hospitals was sufficient for service provision. However, some obstetric departments did not have an ultrasound of their own and had to share with the whole hospital. In some district hospitals, the ultrasound machine was located in the paramedic department and it meant that patients had to move around 50m away from the obstetric department to be examined by ultrasound.

"Regarding medical equipment for the obstetric department, I think we have enough for the minimum requirement. We have enough instruments for obstetric operations for example. But the obstetric department does not have ultrasound, and ultrasound service is arranged in only one place".

District level _Manager_5, District level _Manager_11

To sum up, the organisation of the MH network in both provinces has been stabilised as discussed in Chapters 5 and 8. However, resources for investing in infrastructure and medical equipment, and funds for regular operation of preventive medicine, including MH are inadequate, limited and not keeping up with demand (Vietnamese Ministry of Health and Health Partnership Group, 2013). Indeed, the probability of accomplishing EOCs very much depends on the resources provided for the health facilities at the grassroots level. The inadequacy of health facility

buildings, the lack of some essential drugs at CHCs (such as Magnesium Sulphate for the treatment of severe pre-eclampsia and eclampsia) evidently resulted in incomplete implementation of the best technical practices as described in the national guidelines. Deficits in any components related to working conditions will not only affect the quality of health services (Chimwaza et al., 2014) but also decrease HW job satisfaction and motivation, and would "not inspire confidence from the HWs working there, nor from patients" (Willis-Shattuck et al., 2008). The influences of these issues on the health workforce are presented in Figure 9.5.

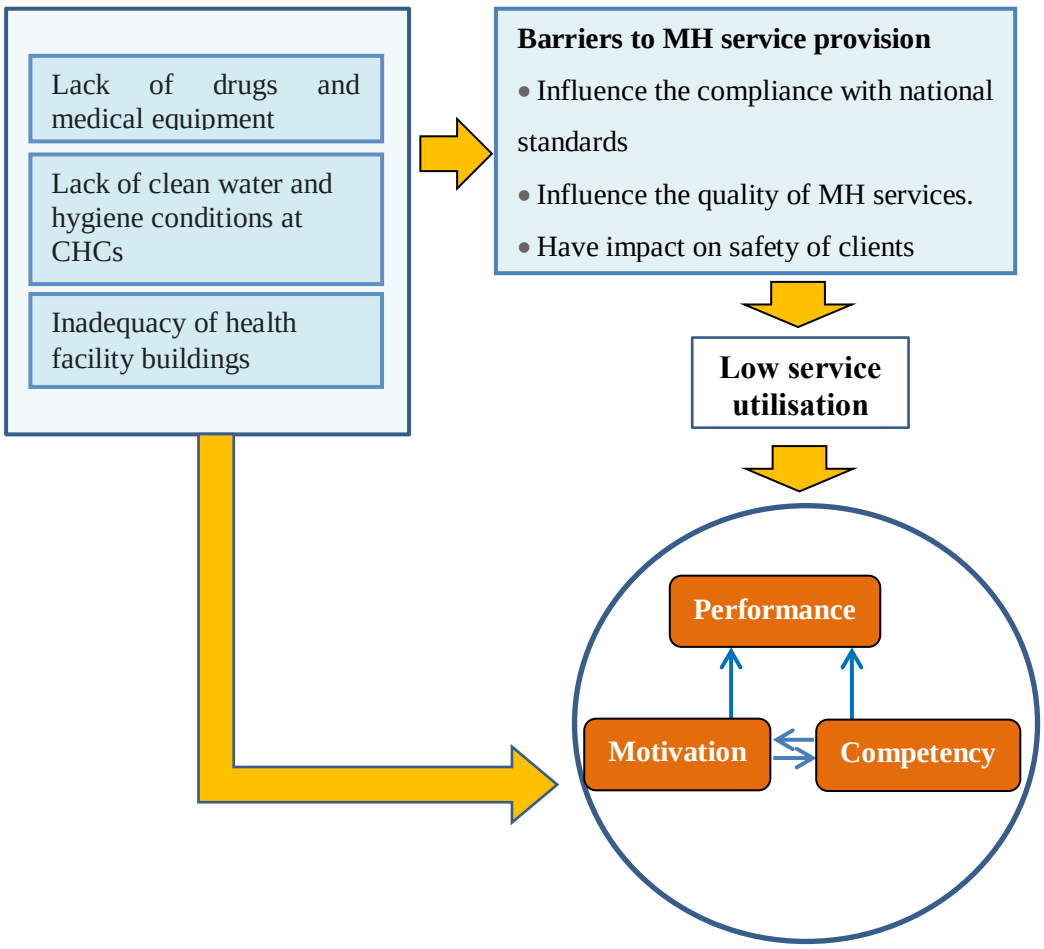


Figure 9.5 Influence of facility infrastructure and resource availability on the health workforce

Figure 9.5 shows two ways that health facilities and resource availability influence the health workforce. On the one hand, these issues directly influence HW

motivation and performance. It was emphasised in the literature that HWs were motivated by visible improvements in quality of services (Dieleman et al., 2009). Hence, the poor working conditions resulting in poor quality of maternal health services would be a de-motivator to the health workforce. In addition, with current inadequate facility buildings, an insufficient clean water supply and lack of medical equipment, HWs cannot perform technical assignments according to the standards as regulated in the National Guidelines for Reproductive Health. On the other hand, these issues were considered as barriers to maternal health services provision. It is evident that they affect the service quality and safety of patients. Ultimately, these issues lead to low service utilisation, which has a negative impact on the health workforce, as explained in the next section on contextual factors.

9.6. SUMMARY OF ORGANISATIONAL FACTORS INFLUENCING HEALTH WORKER COMPETENCIES, MOTIVATION AND PERFORMANCE

Available, competent, and motivated MH workers are the key to safe and quality services in MH, and achievement of related MDGs. However "once skilled attendants are in place, they will require resources, motivation and systems to actually provide services according to standards" (Parkhurst et al., 2005).

In many of the studies tackling human resource issues, factors related to organisation were mentioned as very important when evaluating factors affecting HW performance and motivation. These factors can be grouped within the health facility environment which includes financial incentives, peer pressure, leadership, supervision and resource availability, (Dieleman et al., 2006; Rowe et al., 2005) (Jaskiewicz & Tulenko, 2012). The WHO (2006) grouped these factors as system and support-related intervention that together create an enabling working environment for HWs (World Health Organisation, 2006). In this study, four organisational factors including human resources availability, training opportunities, salaries and supplements, and facility infrastructure and resource availability, all influenced HW competencies, motivation and performance, though in different aspects. Firstly, HR shortages (in both quantity and professional competency) increased workload and work-related stress for HWs, and thus affected their morale and motivation. HR shortages also resulted in inadequate supervision that certainly influenced the performance of lower level HWs who would normally be receiving

this supervision. In addition past studies have found that salary and income, training opportunities and resource availability have had a major impact and have again been confirmed by this study as important factors affecting HW motivation and performance.

In Vietnam there is an ongoing shortage of health human resources both in terms of quantity and professional qualifications and expertise, while policies to attract HWs to the grassroots level and disadvantaged areas remain inadequate. Current policies mainly focus on financial incentives, which alone are insufficient in attracting and retaining HWs. Therefore, there should be an evolving program which considers and reinforces factors encouraging HWs to work, such as training opportunities, appropriate infrastructure, medical equipment and drug supplies. This requires the engagement of national and local level stakeholders, in terms of policy making and interpretation as discussed in Chapter 8.

The final chapter will synthesis the evidence from analysis chapters and set out the conclusions of the study, reflecting the implications for practice and suggesting the direction for future research.

Chapter 10: Integration of findings, Implications and Conclusion

10.1 INTRODUCTION

Human resources for health (HRH) are the most significant driving forces to achieving three health-related MDGs: to reduce child mortality, to improve maternal health (MH), and to combat HIV/AIDS, malaria and tuberculosis (World Health Organisation, 2006). HRH at the grassroots level in particular plays an important role in providing primary health care, which includes maternal health.

Developing a health workforce that is capable, motivated and supported is essential to achieving national and global health goals (World Health Organisation, 2006). While performance of the health workforce is considered the cornerstone of health service quality, there has been no research to identify the determinants of HW performance, and the points of weakness and gaps in the governance and internal management of human resources in the health care system at the district level in Vietnam.

The overall aim of this study was to provide a better understanding of the influence of different level factors (individual, organisational, contextual and governance-related) on HW motivation and performance. Drawing on published theoretical frameworks and a broader literature review, this study developed a new model set out in Chapter 3 in which describes three levels of factors influencing the health workforce performance, namely individual, organisational and broader contextual levels, and the interconnection between them. The conceptual framework also visualised the overarching argument of the study that governance-related factors and other external factors, including contextual factors and organisational factors impact on motivation, competencies, and performance of HWs. This model (conceptual framework) guided the research instrument development and data analysis.

The conceptual framework has evolved further from the analysis process. Through the dialogue between data gathered and with relevance to the literature, the perceptions of Vietnamese MH workers on factors that influence motivation, competencies and performance were explored and contextualised. The underlying argument is that the local governance framework crucially influences organisational

factors which in turn affect competencies, motivation and performance of HWs. The conceptual framework also indicates that governance framework has an indirect impact on individual HWs through organisational factors. In addition, the study asserts that the contextual factors have indirect impacts on HW competencies, motivation, and performance, through the immediate factor, namely service utilisation.

This chapter is divided into two parts. The first part (Section 10.2) synthesises and interprets the key messages of research findings, focusing on the factors influencing the HW competencies, motivation, and performance presented in the Chapters 6 to 9. The second part (Sections 10.3 and 10.4) discusses the implications, the strengths, and limitations of the study, directions for future research, and the overall conclusions of the study.

10.2 INTEGRATION OF FACTORS AFFECTING HEALTH WORKER COMPETENCIES, MOTIVATION AND PERFORMANCE

This section aims to draw upon the findings of the analysis chapters in order to shape the conceptual model, which explains the factors influencing HW motivation, competencies, and performance. Based on the research findings, it considers how the current conceptual framework set out in Chapter 3 needs modification to fit to local contexts.

10.2.1 Individual level factors

There have been a substantial number of studies examining determinants of HW performance, however few of them clearly specified dimensions of performance that they examined (Jayasuriya, Jayasinghe, & Wang, 2014; Lindelow & Serneels, 2006; Razee et al., 2012). Defining standards for HW performance which are relevant and measurable in real workplace conditions is very difficult. Drawing on the concept of "performance according to standards" Marquez (2001), this study focusses on the specific area of essential obstetric care services (EOCs). The standards for EOCs are regulated by the National Guidelines for Reproductive Health (Vietnamese Ministry of Health, 2009) and technical assignment regulations (Vietnamese Ministry of Health, 2005; Vietnamese Ministry of Health of Vietnam, 2001). In this way, the study was able to test the validity of the conceptual framework in a specific context, as performance can be judged against specified standards for the quality of MH services. Given that a substantial number of studies

have confirmed motivation as an important factor in retaining well-perform HW (Dieleman et al., 2006; Paleologou, Kontodimopoulos, Stamouli, Aletras, & Niakas, 2006; World Health Organisation, 2006), this study was based on the published evidence on the relationship between HW competencies and motivation and performance, and thus did not intend to examine this relationship.

The study results showed that MH workers had relatively low qualifications relative to their expected roles and lacked in-service training opportunities. Given that a high proportion of HWs reported being unable to perform EOCs, it can be reasonably inferred that their competencies were inadequate for their roles. The logistic regression analysis in this study found that work experience and training opportunities on specific EOCs were strongly associated with self-reported ability to perform these services (Table 6.3, Chapter 6). These findings are in line with the published literature review (Kak et al., 2001). The study confirmed that in-service training play a critical role in underpinning the competencies of HWs.

With regard to motivation, results showed that two individual factors, gender of HW and ability to perform EOCs, were significantly associated with total motivation scores. Female workers in this study were more motivated than male workers ($\beta = 0.13$, $p= 0.05$, Table 6.10, Chapter 6). This finding is consistent with result of a study on HW motivation in Zambia (Mutale et al., 2013). More importantly, the study found that those participants who could perform more EOCs had higher motivation score ($\beta = 0.21$, $p< 0.01$, Table 6.10, Chapter 6). This indicates that competencies and motivation were strongly associated with each other, consistent with the conceptual framework of this study.

10.2.2 Aspects related to contextual factors

Cultural context, community and clients were described as distal determinants to motivation in the framework on motivation developed by Franco et al. (2002). As clarified in Chapter 7, three main aspects related to contextual factors were perceived to influence motivation, competencies, and performance of the health workforce, though the impact was indirect. As discussed in Chapter 7 and in this chapter, 'service utilisation', an intermediate factor that was influenced by organisational and contextual factors, in turn affects motivation and performance of the health workforce.

This study highlighted several differences between two study provinces in terms of contextual factors. First, geographical conditions were reported as factors that affect service utilisation of both provinces, however in the different ways. The long distances and difficult transportation from residencies to CHCs in Lao Cai was considered a barrier to accessing the health services in CHCs. However, in Bac Giang the road infrastructure was described as flatter and more convenient for travelling, and that facilitates patients bypassing CHCs to seek MH services at the district or provincial levels.

Secondly, client expectation was reported by respondents as considerably influencing service utilisation. In Bac Giang, women are more knowledgeable of MH and have higher expectations of care. As the result of women's increasing autonomy in the selection of delivery location, technology preference, and clients' negative perception of quality of services, underutilisation of MH services in CHCs of Bac Giang was reported. However, even in remote areas of Lao Cai and among specific groups such as ethnic minorities, quality of health care was a reported influence on service utilisation.

Thirdly, in Lao Cai where the majority of population are ethnic people, ethnicity factors which include the culture of ethnic people and language barriers were reported as the major cause of low utilisation of MH services. In particular, culture and beliefs of ethnic people strongly influences women's use of maternity services. For example, a H'Mong woman may have a home-based delivery since her husband does not want strangers see her during delivery. Other ethnic people may believe that delivery does not need to involve HWs. In addition, almost many ethnic women do not speak Kinh language (the official language in Vietnam), they may find it difficult to communicate with HWs. This was reported as reason for women not coming to CHCs to use services.

In summary, in both study provinces, while the reasons differed, low service utilisation evidently resulted in less practice opportunities. This was acknowledged by respondents to affect skill maintenance of HWs and to reduce HW performance over time.

10.2.3 Aspects related to governance framework

Of the few articles that have attempted to examine the links between health systems and maternal health outcomes, one focus has been the influence of health

systems on the maternal health workforce (Gerein et al., 2006). Gerein's review raised issues related to policy environment in attracting and retaining of MH workers in rural areas, and strategies at local level to improve HW satisfaction. It is evident that the health workforce is influenced by a number of national policies ranging from staffing norms, salary and supplement schedules, and training and continuous medical education program. At a higher level, health sector reforms which include decentralisation also influence workforce planning and recruitment (Dodd, Hill, Shuey, & Antunes, 2009).

In this section, the discussion centres on the ways in which governance-related factors may affect HWs. In particular, it will emphasise the two main channels of organisational factors (i.e. organisation of MH service delivery and human resource management practice), through which the governance framework impacts on motivation, competencies and performance of the health workforce.

The governance framework in relation to organisation of maternal health service delivery

The study results add to the evidence on the impacts of health system reforms on MH service provision. As noted by others, their impact on MH care depends on the structure of the health system implementing them (Parkhurst et al., 2005).

First, the district health reform in 2004 caused HR shortages at the district level; in other words, it worsened the human resources for health of district level. Therefore, it did not only affect the capacity of district health level services but had a considerable impact on the quality of supervision given to CHCs. In addition, with unclear regulation of responsibilities of each district health units and unclear collaboration mechanism, it led to difficulty in management of health service delivery (including MH services) at the CHCs.

Secondly, the separation of district health into four/five district health units since district health reforms was reported to cause disconnection between the different functions of the health system and caused confusion to CHCs (United Nations Development Programme, 2010). Inconsistent and untimely instruction of district health units certainly caused difficulty to CHCs in implementing health programs. In addition, having many supervisors that required CHCs to submit more reports, also creating more work for CHWs.

The discussion in Chapter 8 identified the influence of governance-related factors on the health workforce, including 1) they affected the HR availability and supervision quality, 2) to some extent they increased workload of HW, and 3) they also affected the performance management. That is, governance framework affects the organisational factors, and in turn these factors affect competencies, motivation and performance of the health workforce as discussed in Chapter 9.

The governance framework in relation to human resource management practice

The study showed how the current governance framework affected the HRM at the district health level. The critical issue was the low level of autonomy of facility managers in carrying out HR functions. Three main HR activities, which include recruitment, evaluation of staff performance and employment termination were focused on.

With regard to recruitment, there was a broad consensus among informants that the Provincial People's Committee (PPC) and Provincial Department of Internal Affair (PDIA) had a strong influence on the recruitment process, which mirrors findings from China (Liu et al., 2006), Mali (Lodenstein E. & Dao D., 2011) and Tanzania (Munga et al., 2009). Additionally, the number of HWs in health facilities was limited according to Circular 08. These restrictions had a specific impact on HRM as district health managers felt constrained in how they could undertake HR planning and recruit appropriate HWs.

Secondly, the absence of standardised job descriptions, performance evaluations (Vietnamese Ministry of Health and Health Partnership Group, 2009), and unclear criteria for the probation period for new employees resulted in difficulty in managing staff. Although managers and other HWs reported several types of HWs that are not productive (largely because of mismatch between qualifications and skills and the job requirements), it is hard to show the evidence of their poor performance. Therefore, health facility managers failed to implement HR interventions to manage and improve worker performance. This situation certainly affects the morale of managers and the motivation of other HW in the organisation.

Thirdly, of particular note is the unclear mechanism for termination, coupled with little empowerment of health managers in termination decision making. As a result, many CHCs and district health facilities reported an excess of inappropriate

HWs in terms of skills mix and expertise. This may contribute to the reported chronic shortages of qualified HWs.

The ongoing discussion demonstrated that the governance-related factors substantially impacted on the health workforce through organisational factors. It was evident that the current organisation of district health reportedly resulted in ineffective collaboration among district health units and the complexity in the management and accountabilities of each unit as a supervisor of CHCs. These reportedly led to recognisable poor quality supervision of MH services provided to CHCs. In addition, low level of autonomy given to managers in carrying out HRM was reported to influence the competencies, motivation and performance of health workers.

10.2.4 Aspects related to organisational level factors

As demonstrated in Chapter 9, four organisational factors were found to influence HW motivation, competencies and performance, included human resource availability, training opportunities, salaries and supplements, and health facility infrastructure and resources availability. This was evident in both quantitative and qualitative studies.

Staff shortages

The shortages of human resources for health, both in number and qualifications and expertise, influence HW motivation. In the qualitative analysis, many problems described by respondents related to staff shortages such as multiple roles, frequent night shifts and work related stress. Frequent night shifts influence the social life of HWs, particularly female workers who also have family care responsibilities. Frequent night shifts was also reported as associated with individual health issues (Merkus & Drongelen, 2012). In the multiple regression analysis (Chapter 6), those participants who had more frequent shift schedules (4-8 nights or more than 8 nights per month) were less motivated ($\beta = -0.15$, $p<0.05$, Table 6.10, Chapter 6). Other researchers reported staff shortages resulting in higher work load, produce work-related stress, and are demotivating to remaining HWs (Willis-Shattuck et al., 2008).

Qualifications and expertise of co-workers also influenced HW competencies and motivation. Working in an environment where colleagues have low

qualifications and less experience, HWs found themselves unsupported and isolated from professional colleagues and reported less likely to have opportunities to improve their technical competencies. Our study results mirror the findings of a previous study where midwives reported they did not receive support from co-workers even in an obstetric emergency (Graner et al., 2010). This issue was considered as performance obstacle (Gurses & Carayon, 2009) and may result in lack of professional development that was reported as a main reason for job dissatisfaction (Witter et al., 2011), and staff reluctance to work in remote areas (Henderson & Tulloch, 2008).

Furthermore, shortages of staff at the district level resulted in poor quality of supervision provided for CHWs. The main challenge of supportive supervision reported in the study locations was that supervisors lacked appropriate qualifications and experience, and supervisory skills. As the result, supervision was conducted in an ineffective way, involving mainly administrative review rather than support for clinical aspects. This negatively impacted on HWs in terms of improving their performance, morale and motivation (Jaskiewicz & Tulenko, 2012; Rowe et al., 2005; Stekelenburg et al., 2003; World Health Organisation, 2006).

Training opportunities

There is wide agreement on the importance of training opportunities for HW motivation (Willis-Shattuck et al., 2008). Training not only enables HWs to cope with more demanding responsibilities but also helps them to achieve personal professional development goals of (Mathauer & Imhoff, 2006). As noted earlier in the section on individual level factors, multiple regression analysis found that maternal health-related in-service training was important to assuring adequate competencies and performance of HWs providing maternity services.

Both quantitative and qualitative results identified that there were not many specialised in-service training opportunities for MH workers working at the district and commune levels. It was evident that HWs working in disadvantaged areas were more likely to have lower qualifications, and hence were in much greater need than other places for strengthening and improving quality (Vietnamese Ministry of Health and Health Partnership Group, 2009). However, critical staff shortages at these places were reported as one barrier to training. Many respondents did not have time

to attend training because of their high workload and a lack of staff to replace them. This finding is in line with a previous study (Witter et al., 2011).

Training has been considered one of the practical HRM tools to improve competencies of HWs, the "can do" aspect of motivation (Mathauer & Imhoff, 2006). However, the results of this study showed that training was inappropriate in content and conduct (i.e. content of training was not needs driven, and the training method was not practice based) and therefore did not help improve HW knowledge and skills. These results echoed findings from a previous study (Dieleman et al., 2009). In addition, it is likely that the lack of training opportunities failed to help HWs achieve higher goals of career development, and also negatively affected the "will do" side of HW motivation (Mathauer & Imhoff, 2006).

Salaries and supplements

In this study, salaries and supplements were perceived by respondents as too low and insufficient for their basic needs, and that was the main reason for job dissatisfaction. This finding is consistent with the result of a study in Laos, where low salaries translated into low productivity (Dodd et al., 2009). This situation leads to different responses from HWs, ranging from moonlighting on other jobs for additional income or leaving their positions in search of better opportunities. These findings are similar to those in Kenya (Mbindyo et al., 2009) and Cambodia (Henderson & Tulloch, 2008). In addition, the current study showed that payment for HWs was perceived as not commensurate with their responsibilities and efforts that created the feeling among them of not being properly recognised.

There has been a substantial argument about the importance of salaries on HW motivation (Chandler et al., 2009). While some researchers have argued that non-financial incentives such as recognition, feedback, respect from community and colleagues are more important than salaries (Mathauer & Imhoff, 2006), others demonstrated that low motivation could be partially attributed to low salaries (Chandler et al., 2009; Henderson & Tulloch, 2008). The findings from this study support the latter position. In low resource settings and in remote areas, where many HWs are concerned with lower order needs (i.e. basic survival needs which include salary, safety and job security) (Fritzen, 2007), "salary requirements need to be satisfied before HWs can be motivated by other factors" (Chandler et al., 2009, p. 2085).

The Vietnamese Government is attempting to address this issue through a financial incentive scheme that, through a variety of policies on supplements including occupational supplements and hardship supplements, reward workers working in disadvantaged areas or in dangerous work. However, these supplements were perceived as not being sufficient to improve HW motivation.

Health facility infrastructure and resource availability

Working conditions have a strong influence on job satisfaction and HW performance (Henderson & Tulloch, 2008; Willis-Shattuck et al., 2008). Assuming that all HWs are competent and motivated, the standards suggest that a prerequisite for good performance is the adequacy of the health facility infrastructure and resources (World Health Organisation, 2006). This study's results showed that a relatively high proportion of HWs reported being unable to perform EOCs due to the lack of medical equipment and drugs. For example, they could not perform injections of anticonvulsants because of a lack of Magnesium Sulphate, or could not perform assisted vaginal delivery due to a lack of forceps. In reality, constraints on facility infrastructure (e.g. lack of service rooms or small buildings, and lack of clean water), drug supplies and basic medical equipment are definitely barriers to complying with the standards (Marquez, 2001).

It should be noted that these factors not only influence the "can do" side of motivation but also affect the "will do" side. It is clear that poor infrastructure such as small and old buildings, or not having adequate offices (as reported by a respondent from a District Health Centre) result in cramped working spaces which in turn affect HW satisfaction (Rechel et al., 2009).

Three channels whereby organisational factors affect health workers

Underlying the discussion in our study of HW motivation and performance is the role of a "hidden mediator", service utilisation. It is generally agreed that clients do not use services provided by lower level services because HWs are not seen as highly qualified and the medical equipment below standard or expectations. It is less well appreciated that low utilisation, in turn, impacts HW competencies and motivation, thereby creating a negative cycle.

First, our study confirms that lower utilisation results in less opportunity to practice clinical skills and reduced experience, negatively influencing the

maintenance of HW competencies. It is generally understood that the services of CHCs are often underutilised as a result of patients choosing higher level facilities. Therefore, health workers working at the grassroots level have less ability to practice and extend their skills (Witter et al., 2011). Maintenance of regular practice was considered by HWs to be the most important factor in maintaining technical skills (Scotland & Bullough, 2004).

Second, low service utilisation not only affects the existing HWs, but it also affects the recruitment of new HWs. Those health facilities that have lower patient flow are less able to attract and retain qualified people. This adds to the existing issue of low qualifications of health workforce at the grassroots level.

In summary, organisational factors have three main channels whereby they influence health worker performance (Figure 10.1). From this diagram, it can be seen that organisational factors directly affect performance according to standards, and do so indirectly by affecting worker competencies and motivation. These organisational factors also impact health worker motivation, competencies and performance through the intermediary factors, service utilisation and practice opportunity as explained above.

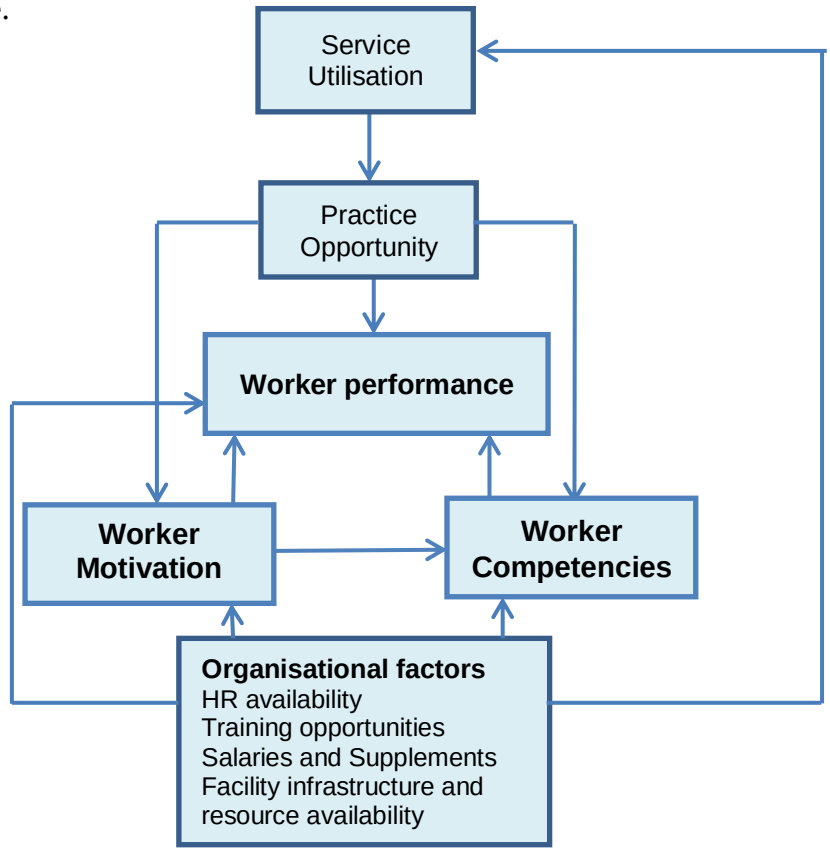


Figure 10.1 Three channels whereby organisational factors influence HWs

10.3 MODIFICATION OF THE EXISTING CONCEPTUAL FRAMEWORK

In summary, the above discussion illustrates an approach to better understanding how different level factors influencing HW competencies, motivation and performance. This in turn, allows better understanding of more general health system functioning. Drawing upon these arguments, the study suggests a modification of the existing conceptual framework. The modification incorporates the role of service utilisation and practice opportunities in the model as intermediate factors, linking the effects of other factors with HW motivation and performance.

As discussed in Chapter 7, the contextual factors did not directly affect motivation, competencies and performance of HWs. However, these factors were reported to lead to low utilisation of MH services, which was acknowledged by respondents to result in less practice opportunities. Accordingly, these issues were reported to affect skill maintenance of HWs and to reduce HW performance over time.

As explained in Chapter 9, it was evident that staff shortages, inadequate in-service training and inappropriate facility infrastructure and unavailability of resources were reported to influence HW performance, the quality of MH services and safety of patients. They were barriers to MH services provision and eventually resulted in low service utilisation, which in turn, impacted HW motivation and competencies, thereby creating a negative cycle.

The flow of interaction among these factors is illustrated in Figure 10.2.

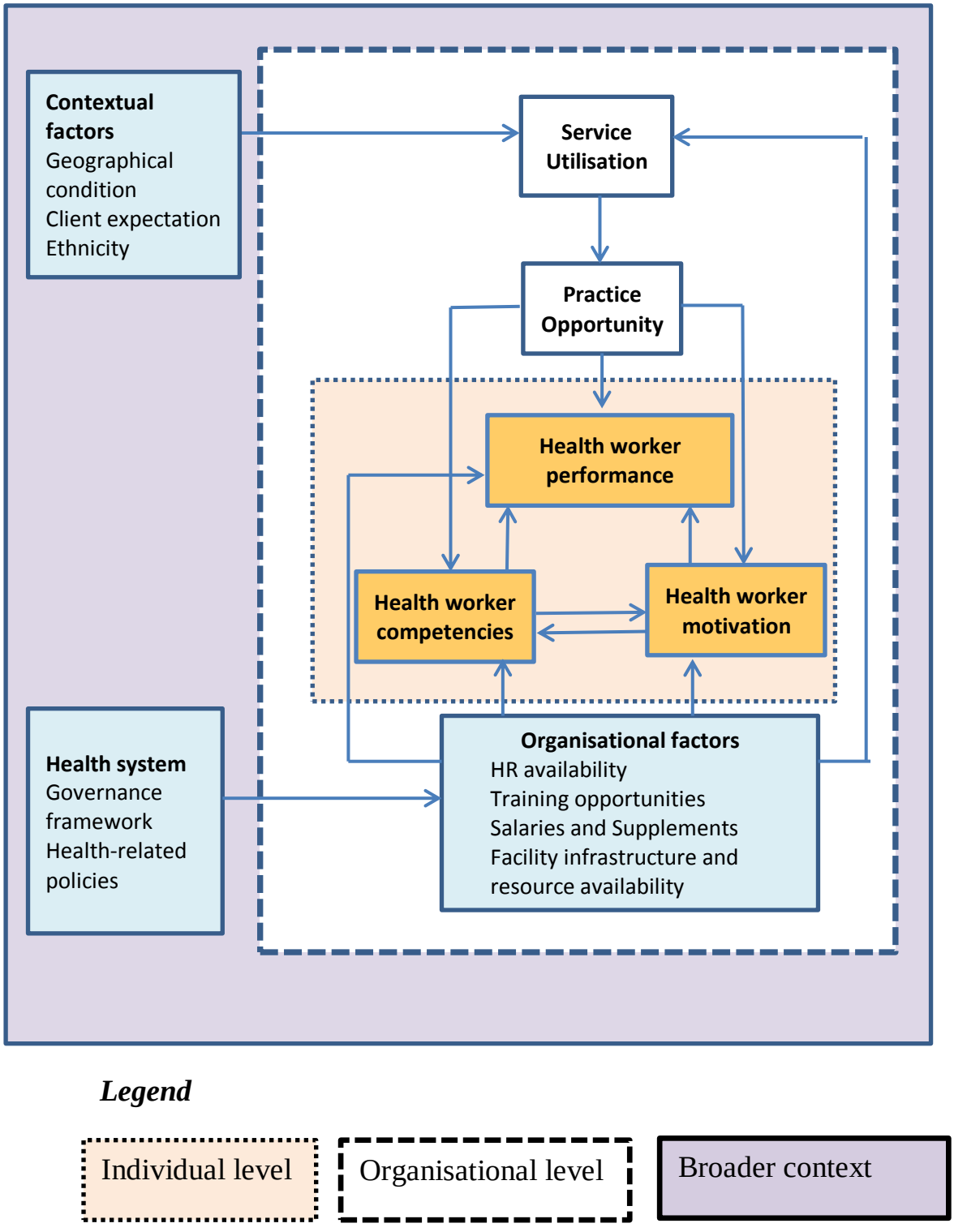


Figure 10.2. Modified conceptual framework

10.4 IMPLICATIONS

Human resources for health have been considered a critical factor to achieving the MDG of improving maternal health, in part by reducing the maternal mortality rate. Developing a health workforce that is capable, motivated, and supported is essential to achieving national and global health goals, and this is drawing increasing attention internationally. Previous studies have been conducted to identify the determinants of performance and have suggested effective approaches to improving HW performance. This research adds to the existing literature on factors influencing HW competencies, motivation, and performance in low and middle income countries.

10.4.1 General implications for local level health services

A number of recommendations about how to improve HW competencies, motivation, and performance arise from this study. The primary consideration is that an effective human resources management process needs to be planned and implemented taking into account local health care resources, social and cultural factors, and the physical environment in an integrated manner. The key consideration is the organisation of professional training for health workers. Given the limited budget allocated for training, it should be competence-based, and adapted to the local context in a range of ways. The training schedule should be compatible with work demand, and the method of training should be both interactive and practical, facilitating practice in real situations. The second consideration is that to avoid professional isolation, rotation from underutilised facilities to other health facilities for a certain period of time within district locations should be implemented. This will provide better opportunities for health workers to attend the breadth of patients needed to maintain their skills, and reduced the likelihood of demotivation.

The findings from this study suggest a critical role of the local health authority in improving the governance framework of the district health system. Strategies should prioritise strengthening the district health organisation towards being more responsive to local health needs. In particular, the responsibilities and required capacity of each district health unit to perform assigned responsibilities should be reviewed to ensure accountability of different district health units and the mechanism

for collaboration among them should be consolidated to assure a consistent and effective direction of health service delivery within the district.

With regard to human resource management practice, consideration needs to be given to granting greater autonomy to health managers for carrying out HRM responsibilities. Health facility managers should be empowered to recruit their staff as well as evaluating their staff performance. In addition, a merit-based recruitment approach should be adopted. Given the fact that medical education has not been accredited, selection criteria should be anchored with practice assessments. The effect of this greater autonomy, however, needs to be monitored. International experience has shown that decentralised recruitment can lead to employment of unskilled HWs at a lower level and result in an even greater disparity in the distribution of the health workforce (Liu et al., 2006; Munga et al., 2009).

10.4.2 General implications for national level governance

At the national level, there is a need for government action on policies relevant to health workforce performance. First, national policies should give greater attention to factors attracting HWs to remote area health services and then retaining these staff. This should include a review of financial and non-financial incentives, and investment on medical equipment and infrastructure. Salaries and supplements policies should be addressed at the national level so that district management can have the flexibility to address concerns that affect health worker motivation. The basic salary scheme and supplements schedule should take into account the ethos of a medical career and the longer duration of medical education (6 years for a medical doctor).

Second, legislation should be revised to enable competent HWs to perform currently restricted procedures. This will help facilitate the empowerment and efficient use of the skilled workforce and thus reduce migration of qualified health workers to higher levels. Specifically, the regulation on technical assignment should take into account the capacity of the facility to provide services according to standards rather than its administrative level, such as human resources qualifications and expertise, infrastructure and medical equipment availability.

Third, the current human resource recruitment and planning policies should be modified to foster HRM effectiveness. Although giving valuable instruction on staffing norms, Circular 08 (2007) has been interpreted rigidly. This proved problematic when health facilities started implementing self-control of finance and HWs manpower according to Decree 43 issued in 2006. The traditional methods of calculating staff per bed (for curative area) or per 100,000 population (for preventive medicine) fail to take into account both the wide local variations in the demand for services, and the work that HWs actually do. As a result, a new approach should be considered in order to address the issues of staff shortages and to facilitate improvement in the productivity of available human resources. One such approach is Workload Indicators of Staffing Need (WISN). WISN is a facility based workforce planning method which was adapted from the original WHO Workload Indicators of Staffing Needs Methodology. So far, the tools have been applied and adapted to contexts in some African and Asian countries (World Health Organisation, 2010). In these places, WISN findings not only highlighted HW shortages and inequities in their distribution but also indicated that many professionals, such as midwives, were frequently undertaking "non-midwife work". The application of this approach will help managers to define the expected roles and responsibilities of different HW categories, improving the appropriateness and efficiency of a staff mix at the facility level and ensuring HW competencies. At the regional or provincial level, health human resources planning should be undertaken in order to estimate the supply of equipment and requirements for healthcare services. For example, the analytical framework developed by Canadian researchers for needs-based health human resources (Birch S et al., 2007) argued this was necessary to enable policy makers to justify the increases in numbers of healthcare providers and increases in medical education and training program places. This approach was applied in Jamaica (Birch S et al., 2009).

10.4.3 Implications in relation to improving maternal health services in the global context

International experience has shown the critical role that strengthening the health system has on improving maternal health. Results from four countries from Africa and Asia, including Morocco, Burkina Faso, Cambodia, and Indonesia have confirmed four lines of action that improved outcomes of maternal and newborn

health. These included 1) enhanced access to facility birthing, 2) improved access to facility based delivery and hospital care for complications, 3) the scale-up of the health workforce providing MH services, and 4) attempts to improve quality (Lerberghe et al., 2014). This research supported these findings and indicated that globally policy-makers should focus their attention on the governance aspects of the provision of health services in low and middle-income countries, which this research showed impact upon the motivation and performance of the health workforce. From the governance perspective, national health policies should be prioritised to secure adequate resources such as finances, health facility infrastructure, drug supply and medical equipment for the health workforce (Martinez & Marineau, 1998). Policy-makers at all decision-making levels should initiate in a coordinated manner the provision of adequate training and education, including assuring the training and competency standards of the health workforce, and integrate their plans into a national strategy focusing on human resources for health.

At the implementation level, this research found that the local governance arrangements strongly influenced the organisation of health service delivery and human resource management, and therefore influenced the health workforce. This finding is likely to resonate in countries with similar complex governance structures for the provision of health services. This study suggested governance practices should be focused on the development of mechanisms for participation in decision-making and coordination of stakeholders at different levels. In addition, the governance of HRH also involves effective leadership, HRM functions and a variety of organisational factors such as HR establishment, supervision, clear accountability, career development, and training that have an important impact on competencies, motivation and performance of the health workforce.

This study demonstrated that contextual factors strongly influenced MH service accessibility and utilisation, and therefore need to be focused on. In particular, the culture of ethnic peoples, client expectations, and geographical conditions contribute to the accessibility of maternity services in mountainous areas. In low and middle-income countries where poor quality of MH services and difficult transport are considered to be barriers to the provision of MH services utilisation, investment also should be prioritised to upgrade road infrastructure. Such interventions, coupled with more effective health communication, could encourage

more women to use maternity services at health facilities, and contribute to reducing the MMR in remote and disadvantaged areas. However, it is apparent that interventions should be tailored to different contexts. Improved access to facility-based delivery, for example, cannot be implemented in high pace in the settings such as sub-Saharan Africa where the speed of scaling up supply does not keep up with ongoing healthcare demand (Lerberghe et al., 2014). To reduce obstetric complications and MMR, the United Nations recommended that skilled birth attendance at delivery (whether at home or at a public health facility) should be made accessible to pregnant women, coupled with a strengthened referral system to a centre which can provide comprehensive essential obstetric care (United Nations Population Fund, 2007a).

10.5 STRENGTHS AND LIMITATIONS

10.5.1 Limitations of the study

Cross-sectional surveys, such as used in this study have limitations when explaining causal relationships, such as the relationship between work characteristics (independent variables) and worker motivation. The sample represents a point in time and the direction of the relationships between variables can only be inferred in the context of the model. It is also possible in this study that the sampling approach may have led to sample bias, such that respondents did not represent the full spectrum of views in the target populations. The aim was to include all of the relevant staff in the self-administered survey. It is estimated that the overall response rate was 95%. Moreover, the overall results reflect a triangulation of information from the quantitative and qualitative data and the substantial consistency between these different sources provides reassurance about the quality of the results.

The questionnaire was designed for self-administration and some questions might have be influenced by recall bias. For example, one question asked participants to list the EOCs in which they were trained. For this question, respondents may not have remembered exactly whether they were trained or not in specific items, or they may not have distinguish between formal training and informal training (where they learnt from other colleagues). Another limitation was that competency of HWs was measured against the basis of self-reported levels of ability to perform EOCs. It is arguable that staff overestimated rather than

underestimated their abilities. MH workers may have reported experiencing more or less barriers than they actually experienced depending on their experience levels and their actual qualifications. For example, the actual infrastructure and availability of resources of health facilities was not documented. However, this limitation was overcome partially by information from the in-depth interviews and retrieval of existing reports at national and local levels.

There are also potential issues with the validity of the motivation measurement scale, given that it was adapted from the original instrument developed for use with HWs in Kenya (Mbindyo et al., 2009). The initial assessment was that the instrument covered the range of issues which had been identified in a number of studies as important in assessing motivation. However, it was likely that some items were not culturally suitable to the Vietnamese context. This issue was addressed by modification of the questionnaire following pre-testing and piloting, and further testing of content validity.

The restriction of the study to two provinces in northern Vietnam may affect the generalisability of findings. The results of this study may be applied to the Northern provinces, both rural and mountainous areas of Vietnam that have similar contexts to the study locations. However, generalisations to other areas such as the Central and Highland or Mekong Delta areas should be made with caution due to cultural, socio-economic and geographical differences. For example, ethnic groups in the Central and Highland areas may have a different culture and health beliefs from those who live in northern mountainous areas. However, the consistency of the results of this study with national surveys, for example on staffing, suggest the core issues identified in this study are likely to be important across Vietnam although the relative importance may vary.

The data was initially collected and analysed in Vietnamese and, in the case of interviews, quotations were translated to English for further interpretation. This potential source of error was partially compensated by supplemental field notes, and the translation of several full transcripts into English, so that the preliminary code book and thematic analysis could be guided by the supervisors who were native English speakers.

10.5.2 Strengths of the study

The application of mixed methods enabled us to best understand the complex nature of human resources for health and the determinants of health workforce performance. While quantitative results provided the numbers and captured known phenomena, the qualitative research helped to explain these phenomena in relation to the causes and effects and to identify any unknown phenomena. The use of in-depth interviews and iterative data collection and analysis allowed new themes to emerge, providing a rich understanding of a broader context in which HWs function daily.

A major strength of the study was the use of simultaneous triangulation that allowed "the findings to complement one another at the end of study" (Plano Clark & Creswell, 2008, p. 152), and increased confidence in the results. The quantitative results were often compared to and contrasted with existing national and local statistics, and consolidated by qualitative data. Additionally, the interviews with HWs and managers at different levels revealed different perspectives but also enabled justification of the problem. The use of triangulation in mixed methods also facilitated the synthesis and integration of existing works and theories that examined the human resources for health and determinants of HW performance. This helped to reflect problems in the global and regional context and facilitate/enable comparison where relevant. During analysis and interpretation, contrast allowed exploration of the differences and similarities between the two provinces in terms of the influence of the governance framework and other factors on HW motivation, competencies and performance.

Concerning the rigor of the study, an effort was made to provide a clear description of the context in which the study was conducted, and of the study design which included data collection, data analysis and the method of integration of quantitative and qualitative research to interpret data. The study was well-organised with the participation of experienced researchers. The survey instruments and interview guides were carefully developed, checked by forward and backward translations between Vietnamese and English, and pre-tested and piloted to ensure content validity. It can be argued that the degree of trustworthiness of this study is high in terms of credibility and transformability (Rolfe, 2006).

This study proposed and demonstrated the links between self-identified competencies and motivation of HW with regard to aspects of MH service delivery. Moreover, by investigating different levels of motivation and performance determinants, this study provided a better understanding of the overall picture of factors influencing HW motivation, competencies, and performance. Especially, it highlighted how governance issues influence the MH workforce MH at the commune and district levels, and how this in turn influenced the performance of HWs, as well as the quality of MH services and population health outcomes. Maternal health was chosen to study as it is a priority issue in many low and middle income countries and "maternal problems are easily diagnosed, effective medical treatments exist, and failure of care is measurable" (Parkhurst et al., 2005, p. 128). That is, it is clear that outcomes in maternal health are substantially influenced by access to quality health care.

This is one of a few studies examining determinants of HW performance that uses the concept of "performance according to standards" that is specified in the WHO's essential obstetric care services guidelines, and has been adapted by the Vietnamese Ministry of Health. In doing so, almost all of the study factors were visibly linked to the ability of HWs to provide EOCs according to the guidelines, and therefore linked to the quality of maternity services. Moreover, while most other studies measured HW competencies through evaluation of knowledge, the assessment of HW competencies in this study was based on the self-rated ability of HWs to perform EOCs. This approach helped to reflect the "real competencies" rather than assessing acquired knowledge, since good knowledge does not always translate to good competencies.

10.6 DIRECTIONS FOR FUTURE RESEARCH

This research focused only on the characteristics of the population being served while other social contextual factors, particularly the effect of client-provider interaction and family pressures on HWs, may also be important, and should be a focus of future research. The literature review undertaken as part of this thesis showed that human resource for health management has been significantly influenced by decentralisation (Liu et al., 2006; Lodenstein E. & Dao D., 2011;

Munga et al., 2009), and future research should take into account the impact that different dimensions of decentralisation may have on the health workforce.

Interesting reasons were also found to why respondents reported remaining in their posts in remote areas. One was because they were satisfied with their current stable job and living conditions, with being close to their hometown and families, and with the good relationships among managers and colleagues at their working places. These reasons were commonly given by medical doctors who had been living in such posts for a long time. Another reason reported by lower qualified respondents (e.g. secondary midwives) was that they had to accept the current situation because there were no other opportunities. While results of this study suggest that motivation factors may be different for different cadres of HWs (Willis-Shattuck et al., 2008), its sample was not designed to conclusively examine this and future research should address this issues specifically.

More research is needed to further develop and validate the measure of worker motivation in different contexts. While it is believed that the instruments were acceptable for the purpose of this study, no doubt it can be further refined. In doing so, there should be replication of the study of the impact of service utilisation on HW competencies, motivation, and performance to confirm the validity of these results.

10.7 CONCLUSIONS

This theory-based research identified the different level factors affecting HW motivation and performance in rural and mountainous settings, and results were largely consistent with findings of previous research. These factors included characteristics of health workers (individual level factors), characteristics of health facilities (organisational level factors) and the characteristics of the broader context (characteristics of the population being served and the governance framework). These factors had direct or indirect impacts on HWs and also interacted with each other. There was no single "lever" for HW performance improvement. Financial incentive strategies need to be coupled with efforts to develop the working conditions and foster the learning environment for professional and personal development. Many of these underlying factors can be addressed by improved governance practice and the introduction of effective and integrated policies on human resources for health.

Understanding the complex nature of relationships among these factors will help in developing more appropriate human resource interventions to address staff shortages and uneven staff distribution, and interventions to improve the accessibility and quality of health services. This study provided recommendations for changes to enhance governance approaches to HRH policy implementation at the local and national levels. This is also likely to be relevant for policy and practice in the health workforce and maternal health services in other developing countries. This study has also contributed to the evolution of the theory on health worker competencies, motivation and performance through the description and testing of a new framework. From a public health perspective, the research aligns with processes aimed towards achieving MDGs related to MH and therefore potentially contributes to improving MH outcomes.

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Appendices

APPENDIX 1: SURVEY QUESTIONNAIRE

SURVEY QUESTIONNAIRE AMONG MATERNAL HEALTH WORKERS AND MANAGERS AT THE COMMUNE AND DISTRICT LEVELS

Section I: General information
Please fill in the appropriate information and circle the suitable choice.

Province: (code) from 1-2.....
District: (code) from 1-4.....

1. Your facility is:

1. Reproductive Health Dept. of the District Health Centre
2. O&G Department of the District Hospital
3. Commune Health Centre

2. Your position: 1. Manager
2. Staff

3. Gender: 1. Male
2. Female

4. Age (in complete years): ……..

5. Ethnic groups: 1. Kinh
2. Other (specify).....

6. Working time:

1. Official working hours only (from 8 am to 5 pm), then transfer to question No 8
2. Official working hours and night shift

7. Your shift schedule:

1. Less than or equal to 4 days per week
2. 5 - 8 days per week
3. More than 8 days per week

8. Type of staff: 1. Fulltime, long-term contract
2. Fulltime, short-term contract
3. Part- time

9. Your position in your organisation:

1. Medical doctor
2. Assistant doctor
3. Midwife
4. Nurse
5. Technician
6. Other, specify: …….

10. Highest qualifications:

1. Primary
2. Secondary
3. College
4. University or equivalent
5. Post graduate

11. Your expertise:

1. General
2. Obstetric
3. Anaesthetics
4. Other, specify: ……

12. Work experience

1. Length of employment: …….....
2. Number of years you have been working in maternal health care area: ……..

PLEASE CONTINUE WITH SECTION II: THE NEXT PAGE

Section II: Training opportunity

13. Have you attended any training courses during the last 12 months?

1. Yes, please continue to the next question
2. No, please go to the section III.

14. How many training courses have you attended in the last 12 months? …….
(Please fill in the number of courses you attended).

15. Out of these courses, how many courses were related to Reproductive Health?
(Please fill in the number of courses you attended).

16. Please select the topics of Reproductive health that you were trained in Over the last years.
(Tick the corresponding column).

1.	Newborn care	
2.	Common diseases of newborns	
3.	Management of obstetric complications	
4.	Management of labour stages	
5.	Antenatal care, during delivery and post-natal care	
6.	Obstetric ultrasound	
7.	Safe motherhood	
8.	Family health planning	
9.	Prevention of HIV transmission from mother to child	
10.	Prevention of STDs (sexually transmitted diseases):	
11.	Communication and counselling on reproductive health	
12.	Adolescent reproductive health	
13.	Planning and monitoring of the quality of services	
14.	Report systems (related to reproductive health)	
15.	Other, specify:…….	

PLEASE CONTINUE WITH QUESTION 17 ON THE NEXT PAGE

17. **In your opinion, what are the *three most important training topics* related to maternal health you need to attend in order to fulfil your duties better?**

(Specify the topic)

1……

……

2……

……

3……

……

PLEASE CONTINUE WITH SECTION III: THE NEXT PAGE

Section III: Competency level of MH workers on Essential Obstetric Care services (EOCs)

Questions 18-29 ask you to self-assess your ability on performing EOCs.

In the column "I have been trained to do it", please choose "Yes" if you were trained, "No" if you were not.

In the column "I am able to do it", please choose "Yes" or "No".

If you choose "No", please select reasons for being unable to perform you can choose more than one reason**.**

In this table, questions 18-22 are applied to the commune level only. Questions 23-30 are applied to the district level only.

Please read all questions carefully and select the most suitable option for your situation.

Please turn next page.

	These questions apply to <u>commune health workers only</u>					
	Essential Obstetric care functions	**I have been trained to do it**		**I am able to do it**		**Reasons for being unable to perform. (you can select more than one option)**
		Yes	**No**	**Yes**	**No**	
18	Injection/transfusion of antibiotics					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
19	Injection/transfusion of oxytocics					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
20	Injection/transfusion of anticonvulsants					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
21	Manual removal of placenta and uterine checking (in case of haemorrhage)					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
22	Normal delivery assistance					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
	For health workers at the district level, please go to the next page					

	These questions apply to <u>health workers at the district level only</u>					
	Essential Obstetric care functions	**I have been trained to do it**		**I am able to do it**		**Reasons for being unable to perform. (you can select more than one options)**
		Yes	**No**	**Yes**	**No**	
23	Injection/Transfusion of antibiotics					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
24	Injection/Transfusion of oxytocics					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
25	Injection/transfusion of anticonvulsants					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
26	Placenta removal/uterine checking					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
27	Uterine curettage for retained placenta					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
28	Assisted vaginal delivery (e.g. vacuum extraction, forceps delivery)					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
29	Blood transfusion					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:
30	Caesarean section					1.Because I am **not** allowed to do it 2. I am allowed to do it, but I am not trained enough 3. Because of a lack of drugs and medical equipment 4. Other, specify:

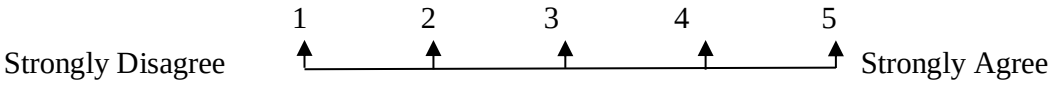
PLEASE CONTINUE WITH SECTION IV: THE NEXT PAGE

Section IV: Health worker motivation

This is a self-administered survey questionnaire. Each health worker will be given about 15-20 minutes to complete this form.

The questionnaires use a 23-item, seven-facet scale to assess health worker motivation developed for research with hospital staff. A summated rating scale format is used with five choices per item ranging from "strongly disagree" to "strongly agree". The seven facets are General Motivation, Burnout, Job satisfaction, Intrinsic Job Satisfaction, Organisational Commitment, Conscientiousness, Timeliness and Attendance.

The original scale is a 5-level Likert scale, from strongly disagree-equal to point 1, and strongly agree-equal to point 5. The scale is presented below.



Please read all statements carefully and **for each statement select only one, the most suitable point** for your situation.

PLEASE GO TO THE NEXT PAGE

PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION

Strongly Disagree 1 2 3 4 5 Strongly Agree

These days, I feel motivated to work as hard as I can	1 2 3 4 5
Overall, I am very satisfied with my job	1 2 3 4 5
I do this job as it provides long term security for me	1 2 3 4 5
I feel emotionally drained at the end of every day	1 2 3 4 5
Sometimes when I get up in the morning, I dread having to face another day at work	1 2 3 4 5
I only do this job so that I get paid at the end of the month	1 2 3 4 5
I do not think that my work in this facility is valuable these days	1 2 3 4 5
I am satisfied with my supervisor	1 2 3 4 5
I am satisfied with the opportunity to use my abilities in my job	1 2 3 4 5
I am satisfied that I accomplish something worthwhile in this job	1 2 3 4 5
I am not satisfied with my colleagues in my department/facility	1 2 3 4 5
This facility really inspires me to do my very best on the job	1 2 3 4 5
I find that my goals and this organisation's goals are very similar	1 2 3 4 5
I am glad that I work for this facility/organisation rather than for other facilities/organisations in the country	1 2 3 4 5
I feel very little commitment to this facility	1 2 3 4 5
I am proud to be working for this facility	1 2 3 4 5
I am punctual about coming to work	1 2 3 4 5
I always complete my tasks efficiently and correctly	1 2 3 4 5
I am a hard worker	1 2 3 4 5

I do things that need doing without being asked or told	1 2 3 4 5
People do not rely on me at work	1 2 3 4 5
I am not worried about being absent from work	1 2 3 4 5
It is not a problem if I sometimes come back late to work	1 2 3 4 5

Thank you for your time
The research team

APPENDIX 2: INTERVIEW GUIDE FOR MANAGERS

INTERVIEW GUIDE FOR MANAGERS

Participants:

- At provincial level: Representatives of personnel division of Provincial Health Department, and of Provincial Reproductive Health Centre.
- At district level: Representatives of the District Hospital (including Board of Director, Planning Department and Obstetric Department), the District Health Centre (including Board of Director and Reproductive Health Department).
- At commune level: Head of Commune Health Centre.

Introduction

Firstly, we would like to thank you for agreeing to participate in this discussion. We would like to better understand how the management of human resources affects your work and on the quality and safety of maternal health services. We hope that we learn information that the Ministry of Health and provincial health can use to improve services and the support for health workers in Vietnam.

We will ask some general questions about different aspects of the current system to seek your views on what does and does not work well from your perspective. There is no right or wrong answer as different people will have different perspectives on the system. The information you give us today will be completely confidential and will not be linked to your name and only reported in the thesis in ways that cannot identify you.

We would like your permission to record this discussion. This is because what you say is very valuable to us and we do not want to miss anything. However, nothing of what you say will be passed on to anyone in a way that identifies you. The results will only be reported as a discussion with 'a selected group of health managers'.

Lastly, the discussion will take about 1 hour.

Do you have any questions you want to ask before we start?

May I proceed with the discussion?

Start recording
General information

Prompt

First, I would like to ask you some general information in relation to the human resources at your location.

Probe

Could you briefly describe the functions and responsibilities of your organisation?

What are the biggest challenges of human resources management in your district/province?

In general, what do you think influences the performance of health workers and maternal health workers in particular at your location?

Human resources management practice at district and commune setting

Prompt

I would like to start by asking you about human resource management at the local level. What issues have you experienced in planning and achieving the workforce you think is needed to provide services?

Probe

How do you make a human resource (HR) plan in your organisation? What policy documents do you use as the guidance for HR planning and HR recruitment? Could you describe the process of getting a plan approved and the role of stakeholders in these processes?

What is your view of the fairness of the recruitment and promotion system for staff?

Is there any difficulty in implementing these processes? How do you think these processes can be better improved?

Do you have adequate guidance to plan health staff numbers?

The Joint Circular 08/2007/TTLT-BYT-BNV provides guidance on staffing numbers and ratios. Has it been useful in planning staffing numbers in your District/facility?

The policy Autonomous 43/2006/NĐ-CP of Government issued in 2006 which grants autonomy to health facilities in terms of financial and human resources management, is intended to give managers some discretion in better rewarding health workers? How do find this policy works in your district?

Training and Development of staff

Prompt

Next, turning to the point of training and development of staff, I would like you to share your experience in making a training plan and implementing it.

Probe

Does your organisation have a plan for training and development of staff? How do you make this plan?

Do you know how much of the annual budget is allocated for training in your organisation? What are the budget sources for training?

What are the types of in-service training that your staff are undertaking? Is there any barrier to sending staff to training courses that you want to share, in terms of budget, policy, processes?

Job description and Performance management

Prompt

Next I would like to ask you about your specific job? Do you have a clear idea of what is expected of you?

Probe

Is there a detailed job description for you or your staff at your facility/ level?

Are job descriptions discussed by staff and periodically revised?

What is the share of administrative activities in the job description of the main categories of HRH? (managers, leaders)

Prompt

Is feedback to people about how they are performing sometimes a problem for people? What is your experience of providing feedback to your staff or having feedback provided to you?

Probe

How is staff performance assessed in your facility? (The principle of assessment, and how the assessment result is used?)

Are there any incentives based on staff performance?

What do you think about the work establishment at your organisation? Is it adequate or not? How do you think it should be improved?

Supportive work environment

Prompt

Next I would like to ask you about your workplace. What do you like about your work place and what don't you like?

Probe

How well do you think people in your workplace work together?

What is the level of communication and information sharing in the workplace?

How clear is the work assignment in your facility?

Supplies of drugs and medical equipment

How appropriate is the supply of drugs and medical equipment in your organisation? Can you focus particularly on essential obstetric care services (EOCs) at your level?

How do you compare the medical equipment in your organisation with other health facilities? (if you know)

What are the factors that help to improve the current situation of medical equipment at the local level?

Operating procedures

Prompt

Next I would like to talk about the things that impact on what you can and can't do in your work? Are there policies or procedures that hinder your work, that is, stop you from providing care the way you think it should be best given? Can you share examples in reproductive health/maternal health areas, or in essential obstetric care

services? (5 EOCs provided at the commune level and 8 EOCs provided at the district level)

Probe

How are rules and policies in your facility applied to employees? What is your experience in implementation of and being compliant to rules and policies?

What do you think about the current organisation of district health? How do they collaborate with each other? Is there space for improvement of the current organisation in order to better respond to local health needs and strengthen the quality of health service?

Quality of Supervision

Prompt

Now I would like to talk about the type of supervision that you get and you give in your work place. Do you find the supervision that you receive helps you in your work?

Probe

First I'd to clarify

Who is responsible for supervising your facility in terms of human resources and technical aspects?

Do you find the supervision that your facility receives helps you in your work?

Probe

Supervision the implementation of standards

How is implementation of standards (particularly in maternal healthcare) at your health facility monitored/supervised?

How are these mechanisms used to improve performance and optimize productivity?

Are there procedures to improve the quality of care, including patient safety?

How would you like the external supervision practice to be improved?

Prompt

Next, I would like to focus more about how you, as a manager supervise your staff.

Do you see any challenges in this task and how could you do it better?

Probe

Who do you supervise? How do you supervise them?

What is your solution if they do not perform well?

Do you like your management job?

Prompt

Is there anything else that you think is important in this area that we haven't talked about?

APPENDIX 3: INTERVIEW GUIDE FOR HEALTH STAFF

INTERVIEW GUIDE FOR HEALTH STAFF

Participants: Health staff (who are not managers) working at reproductive health/maternal health network of district and commune levels.

Introduction

Firstly, we would like to thank you for agreeing to participate in this discussion. We would like to better understand how the management of human resources affects your work and on the quality and safety of maternal health services. We hope that we learn information that the Ministry of Health and provincial health can use to improve services and the support for health workers in Vietnam.

We will ask some general questions about different aspects of the current system to seek your views on what does and does not work well from your perspective. There is no right or wrong answer as different people will have different perspectives on the system. The information you give us today will be completely confidential and will not be linked to your name and only reported in the thesis in ways that cannot identify you.

We would like your permission to record this discussion. This is because what you say is very valuable to us and we do not want to miss anything. However, nothing of what you say will be passed on to anyone in a way that identifies you. The results will only be reported as a discussion with 'a selected group of health managers'.

Lastly, the discussion will take about 1 hour.

Do you have any questions you want to ask before we start?

Prompt

Let's start by talking about your current job. Firstly tell me what you enjoy about your work. What are some of the positive aspects of working in your current facility? Now tell me some of things that aren't so good about your current work conditions.

Probe

Issues for discussion

Remuneration:

- Salary levels
- Other public remuneration – allowances

Working conditions:

- Workload
- Availability of equipment
- Performance management and evaluation

Non-financial rewards & career development:

- Access to training
- Promotion and career development
- Supervision
- Relations with other workers
- Relations with the clients and community

Wider environment:

- Housing
- Living conditions in the area generally (transport, amenities etc.)

- Anything else?

1. Remuneration

Probe

Salaries

- How much on average is your monthly official take-home salary? Do you usually find it hard to support your family on the monthly salary? What do you often have to pay for?
- Are there differences between urban /rural areas, and public/private? [How much more/less]
- Are there differences between different types of health worker? Which ones earn the most? [How much more/less]?

Other allowances

- Tell me about the kinds of supplementary allowances you receive with your job.

- Are these benefits received by all doctors, wherever they live and whatever type of work they do?
- Which of these is most important to you and why?
- How has compensation evolved over time?

2. Working conditions

Workload

- Do you feel contented with the *content* of your work?
- Do you find your work interesting?
- Are you given the right amount of responsibility?
- Are you able to use your skills fully?
- What is the situation like for you, in terms of *amount* of work?
- How many hours per day and days per week are you normally required to work?
    - Do you think this is reasonable?
    - Are there important differences in hours/days worked between:
        - Rural and urban areas?
        - Public and private sectors?
        - Staff working at district and commune levels?
        - Staff working in facilities and those doing public health and preventive work?

Supply of drugs and medical equipment

- How appropriate is the supply of drugs and medical equipment in your organisation? Can you focus particularly on essential obstetric care services (EOCs) at your level? How does this impact on your work?
- How do you compare the medical equipment at your organisation with other health facilities? (if you know)
- What are the factors that help to improve the current situation of medical equipment at the local level?

Job description and Performance management

Prompt

Next I would like to ask you about your specific job? Do you have a clear idea of what is expected of you?

Probe

- Is there a detailed job description for you at your facility/ level?
- Are job descriptions discussed by staff and periodically revised?
- What is the share of administrative activities in the job description of the main categories of HRH? (managers, leaders)

Prompt

Is feedback to people about how they are performing sometimes a problem? What is your experience of providing feedback to your staff or having feedback provided to you?

Probe

- How is staff performance assessed in your facility? (The principle of assessment, and how the assessment result is used?)
- Are there any incentives based on staff performance?
- What do you think about the work establishment at your organisation? Is it adequate or not? How do you think it should be improved?

3. Non-financial rewards

Access to training

- What is your background? Is your current job relevant to your qualification? If not, what kinds of training are you provided in order to perform your tasks?
- What do you think about the current level of training offered to you? When was the last time you did any training?
- Would you like more training? Of what sort?
- What does additional training mean for you?
    - More pay?
    - Better skills?
    - Greater ability to do private practice?
    - Greater promotion prospects? Etc.

- Are training opportunities fairly distributed? If not, who is favoured and why?
- Does the opportunity available for training differ according to where you work? How?

Promotion and career development

- What do you think of current attitudes towards career development of health workers?
- Who decides whether you get promoted? How do they decide?
- What determines if you get promoted or not? Is the process fair?
- How should the promotion system be improved?

Supervision & management

- What do you think of the supervision and management that you receive yourself?
- Is it adequate?
- Do you feel supported?
- How would you like management and supervision to be improved?

R**elationships with colleagues and clients**

- What are the relationships like with other workers?
- How important are these to your satisfaction?
- How could they be improved?
- What about relationships with your clients and the community?
- How important are these to your satisfaction?
- How could they be improved?

5. Wider environment

Housing

- What is your housing like?
- Do you think that housing is an important factor in getting doctors to stay in rural areas?
- Do you have any recommendations on how housing could be improved?

Living conditions

- Does the area that you are working in have good amenities?
- What are the most important amenities in the area that you look at before accepting a job there?
    - Transport?
    - Shops?
    - Proximity to urban areas? Etc.

APPENDIX 4: QUT ETHICS APPROVAL CERTIFICATE

University Human Research Ethics Committee

HUMAN ETHICS APPROVAL CERTIFICATE

NHMRC Registered Committee Number EC00171

Date of Issue: 25/5/12 (supersedes all previously issued certificates)

Dear Mrs Thi Hoai Thu Nguyen

A UHREC should clearly communicate its decisions about a research proposal to the researcher and the final decision to approve or reject a proposal should be communicated to the researcher in writing. This Approval Certificate serves as your written notice that the proposal has met the requirements of the *National Statement on Research involving Human Participation* and has been approved on that basis. You are therefore authorised to commence activities as outlined in your proposal application, subject to any specific and standard conditions detailed in this document.

Within this Approval Certificate are:

* Project Details
* Participant Details
* Conditions of Approval (Specific and Standard)

Researchers should report to the UHREC, via the Research Ethics Coordinator, events that might affect continued ethical acceptability of the project, including, but not limited to:

(a) serious or unexpected adverse effects on participants; and
(b) proposed significant changes in the conduct, the participant profile or the risks of the proposed research.

Further information regarding your ongoing obligations regarding human based research can be found via the Research Ethics website http://www.research.qut.edu.au/ethics/ or by contacting the Research Ethics Coordinator on 07 3138 2091 or ethicscontact@qut.edu.au

If any details within this Approval Certificate are incorrect please advise the Research Ethics Unit within 10 days of receipt of this certificate.

Project Details

Category of Approval:	Human non-HREC		
Approved From:	25/05/2012	**Approved Until:**	25/05/2015 (subject to annual reports)
Approval Number:	1200000087		
Project Title:	Governance of human resources on maternal healthcare system in Vietnam: A critical analysis		
Experiment Summary:	Understand how governance issues influence health workforce for maternal health at a provincial level, how this impacts on quality of health care and population health outcomes, and on the implementation of government policies intended to improve maternal health.		

Investigator Details

Chief Investigator: Mrs Thi Hoai Thu Nguyen

Other Staff/Students:

Investigator Name	Type	Role
Prof Andrew Wilson	Internal	Supervisor
Dr Fiona McDonald	Internal	Supervisor
BUI THI THU HA	External	Supervisor

Participant Details

Participants:
Approximately 360

University Human Research Ethics Committee

HUMAN ETHICS APPROVAL CERTIFICATE

NHMRC Registered Committee Number EC00171

Date of Issue: 25/5/12 (supersedes all previously issued certificates)

Location/s of the Work:
Lao Cai and Bac Giang, Vietnam

Conditions of Approval

Specific Conditions of Approval:
No special conditions placed on approval by the UHREC. Standard conditions apply.

Standard Conditions of Approval:
The University's standard conditions of approval require the research team to:

1. Conduct the project in accordance with University policy, NHMRC / AVCC guidelines and regulations, and the provisions of any relevant State / Territory or Commonwealth regulations or legislation;

2. Respond to the requests and instructions of the University Human Research Ethics Committee (UHREC);

3. Advise the Research Ethics Coordinator immediately if any complaints are made, or expressions of concern are raised, in relation to the project;

4. Suspend or modify the project if the risks to participants are found to be disproportionate to the benefits, and immediately advise the Research Ethics Coordinator of this action;

5. Stop any involvement of any participant if continuation of the research may be harmful to that person, and immediately advise the Research Ethics Coordinator of this action;

6. Advise the Research Ethics Coordinator of any unforeseen development or events that might affect the continued ethical acceptability of the project;

7. Report on the progress of the approved project at least annually, or at intervals determined by the Committee;

8. (Where the research is publicly or privately funded) publish the results of the project is such a way to permit scrutiny and contribute to public knowledge; and

9. Ensure that the results of the research are made available to the participants.

Modifying your Ethical Clearance:
Requests for variations must be made via submission of a Request for Variation to Existing Clearance Form (http://www.research.qut.edu.au/ethics/forms/hum/var/var.jsp) to the Research Ethics Coordinator. Minor changes will be assessed on a case by case basis.

It generally takes 7-14 days to process and notify the Chief Investigator of the outcome of a request for a variation.

Major changes, depending upon the nature of your request, may require submission of a new application.

Audits:
All active ethical clearances are subject to random audit by the UHREC, which will include the review of the signed consent forms for participants, whether any modifications / variations to the project have been approved, and the data storage arrangements.

End of Document

APPENDIX 5: ABSTRACT SUBMISSION FOR PRESENTATION AT MENZIES CENTER FOR HEALTH POLICY, SYDNEY

Emerging Health Policy Research Conference

Monday, 14 October 2013

Menzies Centre for Health Policy, University of Sydney

Name of Author(s)

Nguyen, Thi Hoai Thu*, PhD student of Queensland University of Technology.

Professor Andrew Wilson, Menzies Centre for Health Policy, University of Sydney.

Dr. Fiona McDonald, Senior Lecturer, Faculty of Law, Queensland University of Technology.

Presenter's institution/organisation, address, email, and telephone:

Queensland University of Technology

Kelvin Grove campus

Victoria Park Road, Kelvin Grove, 4059

e-mail: t113.nguyen@student.qut.edu.au

Tel: 07 3138 5767/ 0411 264 367

Short Biography of presenter (maximum 50 words):

Nguyen, Thi Hoai Thu (MSc) is a lecturer in the Hanoi School of Public Health and is a PhD student of the Queensland University of Technology. Her research encompasses issues related to health system governance. Her recent research includes multi-partner research in the three Asian countries including Vietnam, HESVIC (Health systems stewardship and regulation in Vietnam, India and China) funded by the European Commission.

Presentation Title (up to 10 Words):

Governance of the health workforce in Vietnam: a case study on maternal health services.

Keywords: (up to 5 to assist organisers in streaming papers):

Human resources for health, maternal health services, training and education for health staff.

Introduction/Background:

The availability of skilled health providers is critical in assuring high quality of healthcare services, including antenatal, delivery, emergency obstetric and post-natal services. Good governance of the health workforce will help improve the quality of health care, assist to address equity in accessing health services, and may improve the efficiency of health resource usage. Nonetheless, governance of the health workforce seems to have been a neglected issue in Vietnam.

Research Questions:

What is the current quantity, quality, and organisation of the maternal health workforce in two provinces in Vietnam? How much do governance processes vary at the district level?

Methodology:

The research has been conducted in two provinces in the Northern mountainous area of Vietnam, Bac Giang and Lao Cai. This paper will report the quantitative analysis of self-administered questionnaires. The questionnaires consisted of four sections namely the qualifications and experience of maternal health workers, their level of motivation and competence and relevant demographic information.

Analysis of the survey indicates there are distinct differences between the provinces as to the availability, qualifications of and training opportunities for staff engaged in district maternal health services at the district and commune levels.

Policy Implications:

The study will lead to a better understanding of the factors influencing the health workforce's capacity, capability and distribution, and management of human resources. This may lead to recommendations for changes to enhance governance approaches to the maternal health workforce at the provincial level in Vietnam.

N.B. All presenters will be asked to include a final slide in their presentations that summarises the policy recommendations and/or implications that can be drawn from the research presented.

APPENDIX 6: ABSTRACT SUBMISSION FOR PRESENTATION AT GLOBAL HEALTH FORUM, GENEVA

Global Health Forum
Interconnected Challenges, Integrated Solutions
15-17 April, 2014, Geneva

Title of presentation: Maternal Health Workforce Management in Vietnamese Health Communes.

Name of Author(s)

Nguyen, Thi Hoai Thu*, PhD student of Queensland University of Technology.

Professor Andrew Wilson, Menzies Centre for Health Policy, University of Sydney.

Dr. Fiona McDonald, Senior Lecturer, Faculty of Law, Queensland University of Technology.

Summary (700 characters):

As part of a study into the governance of the health workforce in Vietnam, this study examined the impact of health worker qualifications, training opportunities and other factors on reported ability to perform Essential Obstetric Care services (EOCs) in two provinces. While qualifications and training were the most important factors, national and district policies such as those regulating the type of health professionals able to prescribe essential medications were also important factors in limiting the provision of EOCs.

Introduction/Background (1300 characters):

Vietnam's national policies recognise the importance for an effective health system of ensuring sufficient human resources (Politburo Resolution No. 46/NQ-TW dated 23 February). However, current analysis indicates a number of issues, including an imbalance and maldistribution of the essential health workforce, shortages of appropriately skilled health workers and constraints in management and utilization of health workers. Parallel studies of the impact of health policies on the health workforce, the implementation of health policies and provision of health care services in Vietnam have identified a number of governance-related issues. These include a lack of staff accountability, quality control measures in relation to workforce training and skills maintenance, inadequate participation of community

and civil society organisations, and an unreliable health information system. Underdevelopment of governance mechanisms may be a significant barrier to the effective implementation of policies. However, so far there has been no systematic analysis to identify the points of weakness or gaps in the governance and internal management of human resources in the health care system at the provincial and district levels in Vietnam.

Objectives (2500 characters):

Ensuring access to good maternal health services is critical for Vietnam to achieve the relevant Millennium Development Goals and this requires a well-qualified maternal health workforce able to provide the EOCs. This study aims to examine the impact of national and district policies relevant to human resource management and organisational factors on the maternal health services. Specific objectives were:

- To identify the availability and qualifications of maternal health workers at the commune level in two provinces.
- To identify the ability of maternal health workers to provide EOCs and the barriers to providing these services.
- To understand how the existing organisational and policy factors influence the ability of maternal health workers to provide EOCs.

Methodology (2500 characters):

The research was conducted in five districts in two provinces in the Northern mountainous area of Vietnam. A mixed methods approach was used consisting of a self-administered questionnaire given to health workers at commune and district levels, and in-depth interviews with commune maternal health workers and managers engaged in maternal health at district and provincial levels. The questionnaire consisted of four sections, namely demographic information relevant to maternal health workers, training opportunities they attended, self-rated ability to perform EOCs and a scale to measure elements of work motivation.

The sample for the quantitative survey was 192 maternal health workers who volunteered to complete the questionnaire. In-depth interviews were conducted with 60 participants of whom 18 were chosen to represent the different workforce groupings and were fully analysed.

Initial analysis to explore the differences in maternal health workforce between the two provinces consisted of two way tabulations with statistical significance testing using the Chi-square test. All variables found to be significant in this analysis and potentially confounding variables were incorporated into multivariate regression analysis to identify the independent association with the ability to perform EOCs.

For the qualitative analysis, the subset of 18 interviews was transcribed. Inductive analysis was used to identify, code and organise themes arising from the raw data, with quotations servings as units of analysis. Data was analysed for consistently occurring themes or categories using a qualitative research package, N-Vivo software.

Result (2500 characters):

Analysis of the survey indicated distinct differences between the provinces as to the mix of maternal health professionals, their qualifications, their access to further training, and their self-reported ability to perform EOCs at the commune levels.

The multiple logistic regression analysis showed that health workers were more likely to report having training in all EOCs if they worked at the district level, had higher qualifications (university and equivalent or higher) and obstetric expertise.

In both provinces, only 21.6% of participants reported being able to perform all EOCs. The most common reasons reported by HWs for not being able to perform EOC services was “Because I am not allowed to do this”, followed by “Lack of training” and “Lack of drugs and equipment”.

The most important determinants of ability to perform the EOCs were qualification and training. Although having attended a training course in the last 12 months was not significantly associated with ability to perform EOCs in the univariate analysis, in the multivariate analysis it was significant.

Data from the in-depth interviews confirmed a common theme which was that respondents felt constrained in their potential roles by policies. It also identified other organisational, policy and resource constraints faced by staff and managers at the commune and district levels.

Conclusion (2500 characters):

The study provides a better understanding of the factors influencing the health workforce's capacity and capability in the maternal health context in Vietnam.

The restrictions on who can perform EOCs should be reviewed to improve access to full EOCs.

To use the health workforce most efficiently and effectively, all appropriately trained staff need to be given the authority to carry out all EOCs including prescription of essential medicine regardless of qualifications.

Given that access to maternal health services provided by appropriately trained health workers has been shown to be important to better maternal and child health, this reform would assist Vietnam to achieve the MDGs.

APPENDIX 7: ABSTRACT SUBMISSION FOR PRESENTATION AT MENZIES CENTER FOR HEALTH POLICY, SYDNEY

Emerging Health Policy Research Conference

Thursday, 2 October 2014

Menzies Centre for Health Policy, University of Sydney

Name of Author(s)
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Short Biography of presenter (maximum 50 words):

Nguyen, Thi Hoai Thu (MSc) is a lecturer in the Hanoi School of Public Health and is a PhD student of the Queensland University of Technology. Her research encompasses issues related to health system governance. Her recent research includes multi-partner research in the three Asian countries including Vietnam, HESVIC (Health systems stewardship and regulation in Vietnam, India and China) funded by the European Commission.

Presentation details:

Presentation Title (up to 10 Words):

Does the local governance framework impact on the health workforce?

Keywords: (up to 5 to assist organisers in streaming papers):
Governance, human resources for health, health worker performance.

Introduction/Background:

It is generally understood that health policies and governance framework are external factors that feed into organisational factors, which in turn contribute to the individual health workers. From a health system perspective, central government agendas such

as decentralisation and health reforms also influence the regulation and deployment of human resources for health (HRH) at all level of the health system and affect the level down to local systems in which individual health staff work.

Research Question:

1. How does governance-related issues at provincial and district level affect the maternal health workforce in Vietnam?
2. From this, what aspects of the health system governance could be strengthened from the perspective of human resources for health to improve motivation and performance of the health workforce?

Methodology:

This research was conducted in two northern mountainous provinces of Vietnam. This paper report the result of qualitative analysis of 43 in-depth interviews conducted with respondents from commune to central levels.

Findings:

This paper will describe the specific routes whereby governance framework influences on health worker motivation and performance. These include organisational processes and HRM practice.

Policy Implications:

The study will lead to a better understanding of the governance-related factors, particularly the local governance framework influencing the motivation and performance of the health workforce. This may lead to recommendations for enhancement of an effective human resources management intervention in the integrated manner within limited local resources.

N.B. All presenters will be asked to include a final slide in their presentations that summarises the policy recommendations and/or implications that can be drawn from the research presented.